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EDITORIAL.

WITH the commencement of Volume VIII. of NEW REMEDIES, its price will be changed from $1.50 to $2.00 per annum. It will nevertheless be one of the cheapest pharmaceutical journals published in this country, so far as its price is concerned, and the effort of its editorial staff will continue to be exerted to make it also the best as regards the quality and amount of its contents. The change of price will be made for various reasons, not the least of which is the fact that the proposed amount will agree more nearly with the value of the journal. Again, when the monthly series was first started, it was thought desirable, in view of the prospective competition with established journals, to give it a price corresponding to that of the others, although some of these are published chiefly to serve as advertising media for certain manufacturers, and the question of profit or loss has been a matter of secondary importance, while a large circulation, at any expense, was the point to be attained.

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It may mollify the subscriber who weighs the value to him of fifty cents more during a year against twelve numbers of NEW REMEDIES to know that, in exchange for this small amount, we will be able to give him full-page portraits of some of the leading pharmacists and therapeutists of this country, and also colored plates of such new medicinal plants as may appear to be of sufficient general interest to warrant such illustration.

Those who have already subscribed for the next volume at the old rates will receive their journal as usual, but all subscriptions after this date must be at the new rate, viz., $2.00 per annum (including prepayment of postage).

WE were misled, in our July number, to attribute malicious motives to the agents of Senes' "Italian Cosmetic," in the case of prosecutions which had been commenced against certain Brooklyn druggists for the sale of a fraudulent imitation of this article. A further examination shows, however, that this was not so. Circulars had previously been sent to all these persons, warning them against purchasing or selling such imitations, and the prosecutions were not only perfectly justifiable, but were, indeed, demanded by the interests of the rightful proprietors, which the agents here were under obligations to protect.

WITH this number of NEW REMEDIES we publish a two-page colored map of the regions from whence many of our important drugs are derived, and on pages 302 to 305 will be found a supplementary list of the drugs indigenous or acclimated in the United States and in Great Britain, together with another, indicating the chief commercial drugs and their sources.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

Gooch's Method for the Separation of Precipitates in Quantitative Analysis.

A METHOD for the ready separation of precipitates by the use of a felt of anhydrous asbestos, was recently described by Mr. F. A. Gooch before the American Academy of Sciences; the essential features of his process being as follows: He finds that a felt of this material is capable of filtering liquids with a rapidity and efficiency at least as great as may be obtained by the use of good filter paper; it is light, compact, incombustible at the highest temperatures used in analytical processes; is not acted upon by acids (excepting hydrofluoric acid) or alkalies; is sufficiently coherent to resist entirely the disintegrating action of a liquid forced through it under the pressure of the Bunsen pump, and which may, moreover, be prepared by a very simple process—in short, a filtering material which, in my belief, makes it possible to reach a high degree of accuracy in many analytical processes which hitherto have been none of the best, and to add to those already known new methods which previously have been impracticable.

The mode of preparing and using the asbestos felt is described by him as follows:

"*First.* White, silky, anhydrous asbestos is scraped to a fine short down with an ordinary knife-blade, boiled with hydrochloric acid to remove traces of iron or other soluble matter, washed by decantation, and set aside for use.

"*Secondly.* A platinum crucible of ordinary size, preferably of the broad, low pattern (Fig. 1), is chosen, and the bottom (Fig. 2) perforated with fine holes (the more numerous and the finer the better) by means of a steel point; or, better still, the bottom may be made of fine platinum gauze. Next a Bunsen funnel of the proper size is selected, and—following Munroe's plan for holding his porous cones—over the top a short piece of rubber tubing is stretched and drawn down till the portion above the funnel arranges itself at right angles to the direction of the stem. Within the opening in the rubber the perforated crucible is fitted as shown in Fig. 3, and the funnel is connected with the receiver of a Bunsen pump or other exhausting apparatus in the ordinary manner.

"To make the asbestos felt, the pressure of the pump is applied, and a little of the asbestos, prepared as described, and suspended in water, is poured into the crucible. The rubber and the crucible are held together by the pressure of the vacuum-pump with sufficient force to make an air-tight joint: the water is drawn through, and the asbestos is deposited almost instantly in a close compact layer upon the perforated bottom, more asbestos (if necessary) in suspension as before being poured upon the first, until the layer becomes sufficiently thick for the purpose for which it is intended. Finally, a little distilled water is drawn through the apparatus to wash away any filaments that might cling to the under side, and the filter is ready for use—the whole process occupying less than is necessary to fold and fit an ordinary paper-filter to a funnel.

FIG. 1.

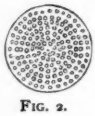


FIG. 2.

FIG. 3.

FIG. 4.

FIG. 5.

"To prepare the filter for the estimation of a precipitate, the crucible with the felt undisturbed, is removed from the funnel and ignited. In case the precipitate to be subsequently collected must be heated to a very high temperature for a long time, it is better to inclose the perforated crucible with its felt within another crucible, because in such cases asbestos felt is apt to curl at the edges, and without such precaution some of the precipitate might drop through the perforations and be lost. For drying at low temperatures, however, and even for ordinary ignitions a second crucible is unnecessary; but during the ignition of an easily reducible substance, care must be taken to prevent the contact of unburnt gas with the perforated bottom.

"To perform the filtration, the crucible is replaced in the funnel, the pressure applied, and the process conducted precisely as in an ordinary filtration by the Bunsen-pump. It is neces-

sary to observe that the vacuum-pump is to be started before pouring the liquid upon the filter. The final drying or ignition, as the case may be, of precipitate and filter is made without difficulty or need of extra precaution.

"When turbid liquids are to be filtered, or gelatinous precipitates to be separated, instead of the perforated crucible I prefer to use a platinum cone (Figs. 4 and 5), the upper part of foil (to make a tight joint with the rubber fitting of the funnel), the lower of gauze. The method of covering the gauze with felt is identical with that described above. By reason of the larger filtering surface of this apparatus, the tendency to become clogged is, of course, very much diminished. When subjected to prolonged ignition, the gauze cone is inclosed within a crucible or cone of platinum foil.

"In operations in which platinum is liable to receive injury, a porcelain crucible with a perforated bottom may be used, but recourse to this is rarely necessary, particularly when one may use the gauze cone, protected as it is by asbestos felt; moreover, the perforation of porcelain with numerous fine holes is a matter of considerable difficulty and expense.

"Asbestos felt may be also used in the process of reverse filtering, it being merely necessary to dip the platinum rose into the asbestos mixture, after starting the vacuum-pump, in order to make the felt. The rose, with the felt attached, and the vessel in which the precipitate is collected, are to be weighed together, both before and after filtration.

"Nothing can be simpler than the whole method of preparation and use of the apparatus which I have described, and its efficiency is extremely great. Clean water may, under the pressure of a Bunsen pump, be passed through a gauze cone coated with asbestos felt, which exposes a filtering surface of twenty-four square centimetres (nearly the same as that of a paper-filter, eight centimeters in diameter when folded in the ordinary manner) with ease at the rate of a litre a minute.

"When the filtering surface is less, the rapidity of filtration is, of course, somewhat diminished, but always exceeds that of paper of the same dimensions. When the felt is deposited upon gauze, the layer may be suprisingly thin and yet be efficient enough for all ordinary purposes. If the layer of felt be quite thick, the filtrate from baric sulphate freshly precipitated in the cold may be made to pass through clear. But the great superiority of asbestos felt lies in its constancy of weight, whether dried at high or low temperatures, the rapidity with which it may be safely and completely dried, and its refractoriness as regards acids (excepting hydrofluoric acid) and alkalies. These advantages appear most prominently in processes which involve the separation and desiccation—

"*First*, of precipitates which

(like K_2PtCl_6. Hg_2Cl_2)

must be dried at low temperatures, on account of a tendency to decompose spontaneously at high temperatures.

"*Secondly*, of precipitates which

(like Sb_2S_3. $PbSO_4$. $ZnCO_3$)

have usually been dried slowly and tediously at low temperatures, or have been separated from the filter before ignition, to avoid the danger of reduction by heating in contact with carbon.

"*Thirdly*, of precipitates which

(like $(NH_4)_2MgP_2O_6$)

may be ignited in contact with carbon, but which make its complete combustion difficult.

"In all cases the time required to dry and ignite precipitate and filter is a minimum, inasmuch as heat may be applied as soon and to as high a degree as the precipitate itself will permit. Even in processes in which paper filters find their most convenient application, paper has generally no superiority over asbestos felt."

Therapeutical Properties of Monimia Polystachia.

AMONGST the medicinal plants recently suggested as possessing important therapeutic value is the *Monimia polystachia*, one of the Polygalaceæ, which has an extensive distribution, growing near the summits of steep mountains in South America, as well as in the woody plains and marshy districts of the same region. It is a pretty plant, to which, however, hitherto but little attention has been paid by chemists. Therapeutic virtues have been attributed to two parts of the plant, the bark of the root and the recent leaves. The latter are regarded as expectorant, whilst the former is considered to be astringent. The root of the plant is fusiform, sixteen or eighteen inches in length, of yellowish color, with scattered darker spots, slightly disagreeable odor, and taste at first sweetish, but subsequently becoming acrid and bitter and exciting salivation. Its infusion is turbid, like soapy water. By the Americans it is named "yallhoy," [?] and the bark of the root is pounded and made into a paste. No complete chemical analysis has as yet been made of this drug, but it is known that it contains a large proportion of resinous material. This appears to be divisible into three parts, one of which is soluble in ether, a second soluble in alcohol, and a third, equally resinous, to which they give the name of monnimina. The drug can be administered both as a powder and in infusion. The dose is from 10 to 12 grammes per diem. The following are some of the preparations:—Tincture: bark of the root, 100 grammes; alcohol, 300 grammes. Macerate for four days, frequently agitating, and filter; then add to the residue sulphuric ether, 150 grammes. Macerate for 48 hours more, and mix the two liquids. Ointment: extract of Monimia, 4 grammes; lard, 20 grammes; essence of lavender, 4 drops. Ft. Ung.—*The Practitioner*, from the *Estudos Medicos*.

COMMERCIAL PRODUCTS OF THE CITRUS FAMILS.

BY CHARLES RICE.

[Concluded.]

IV. THE LIME.

Citrus Limetta Risso (*C. medica var. γ L.*)

Engl.: Lime-tree. Limetta-tree. *Fr.:* Limettier. *Germ.:* Limette. Limettenbaum.

The Fruit (39) is pale yellow, oval or globular. According to Risso, this is the Adam's apple (*Pomo d'Adamo*) of the Italians.

Engl.: Lime, Limetta. *Fr.* and *Germ.:* Limette, Lime. *Ital.:* Lime.

The Juice (40) of the fruit is very acid, even acrid. The fresh juice is sometimes used to acidulate spirituous drinks, or for cleaning floors, scenting rooms, etc.

Lime Juice (41, see 35) or concentrated lemon juice, exported for making citric acid, is partly obtained from it.

Essence de Limette (42). Oil of Limetta is obtained from the rind of the fruit. It very much resembles oil of lemon.

V. THE BERGAMOT.

Citrus Bergamia var. *vulgaris* Risso et Poiteau. This species is not known to exist in a wild state. It is cultivated in Greece, Spain, South France, and Sicily, but chiefly about Reggio in Calabria.

Engl.: Bergamot-tree.[11] Lime-Bergamot-tree. *Fr.:* Bergamottier. *Germ.:* Bergamottenbaum. *Span.:* Bergamoto *or* Bergamote. *Ital.:* Bergamotto.

The Leaves (43). An essential oil is distilled from these, which is used for adulterating oil of Bergamot.

The Flowers (44). An essential oil is said[12] to be made from these; but we can find no mention of it in any commercial reports or other reliable sources of information.

The Fruit (45) is round or pear-shaped, of a pale golden color, 2½–3 inches in diameter, with a pale yellow pulp.

Engl.: Bergamot. *Fr.:* Bergamotte. *Germ.:* Bergamotte. Bergamotten-Orange. *Span.:* Bergamota. *Ital.:* Bergamotta.

The Juice (46) of the fruit constitutes a portion of the commercial concentrated lime juice (see 35).

Essence de Bergamotte (47) is prepared by a mechanical process[13] in small quantities, in Greece, Southern France, and Spain. But the commercial oil is almost entirely obtained from bergamots grown about Reggio, and is exported from Messina and Palermo.

Engl.: Oil of Bergamot. *Fr.:* Essence de (*or* à la) Bergamotte. *Germ.:* Bergamottöl, etc.

Here may also be mentioned:

Citrus Limonum var. *Bignetta* Risso. The Bignette-tree. *Fr.:* Vignette.

The Fruit (48) has a yellowish rind; is globular, and has a depression below the blunt navel.

Citrus Lumia Risso et Poit. The sweet lemon. Lumia.

Fr. and *Germ.:* Lumie.

The Fruit (49) is oblong; has a bright yellow rind with a curved navel, and a sweet pulp.

The Essential Oil (50), Oil of Lumia, Essence de Lumie, is prepared at Squillace in Calabria by mechanical means.

VI. THE CITRON.

Citrus medica Risso (*C. medica* var. α L., *C. Cedra* Gall.). *Habitat:* Northern India. Cultivated chiefly in Sicily and Corsica; also in other parts of Italy, in Spain, Portugal, the West Indies, Brazil, etc. This is the only species of Citrus which was known to the ancients.[14]

Lat.: Citrea (*sc.* arbor). Citrus, Citrea (*or* citria) malus. *Gr.:* κιτρέα, κιτρία. *Eng.:* Citron-tree, Cedrat-tree. *Fr.:* Citronnier, Cedratier. *Ital.:* Cedrato, Cedro. *Span.:* Cidro. *Port.:* Cidreira. *Germ.:* Cedraten, Citronenbaum.

The Fruit (51) is generally large, and often attains an extraordinary size, weighing sometimes as much as 20 and even 30 pounds. The whole fruit is often exported salted. There is a curious Chinese variety (*Citrus sarcodactylus*), which ends in five or more long finger-like lobes, known as Buddah's Citron.[15]

Lat.: Citreum, Malum Citreum. *Gr.:* κίτρον, κίτριον, κιτρόμηλον. *Fr.:* Cedrat. *Germ.:* Cedraten-Citrone. *Span.* and *Port.:* Cidra.

Adam's Apple (52). Both the fruit of *Citrus medica* and of *Citrus Pomum Adami* Risso have

[11] *Bergamot* is a corruption of the Turkish *beg-armudi*, "prince's pear."

[12] *Treasury of Botany*, I., 292.

[13] See *Pharmacographia*, p. 109.

[14] The Median apple, μῆλον Μηδικον, was synonymous with κεδρόμηλον (later translated into *citrium malum*) μῆλον Περσικόν "Persian apple," *Malus Assyria* (*Plin.*), and perhaps with μῆλα Ἑσπερίδων, "apples of the Hesperides" (the mythical daughters of Hesperus, who were supposed to reside at the furthest confines of the earth, where they guarded the golden apples. These are, however, by some authorities, held to designate a species of *quince*). The old name κεδρόμηλον, which was used by Dioscorides (ab. 50 A.D.), and for which the Romans, as he adds, used the term κίτρια (=*citria*), had already become obsolete in Galen's time (ab. 170 A.D.). Simeon Seth calls them κίτρα, and, according to one MS., μῆλα Ἰνδικά, "Indian apples." The Latin term *citrus* was applied both to the citron tree, and by confusion with the word *cedrus*, also to *Thuja orientalis*. The mediævo-Latin terms are: citria, citrea, citromela, citrangula (*Monardes*), melangula (*Cæsalpinus*). *Citrangula*, however, was also applied to lemons and oranges (so by the commentators to Mesue's Antidotarium, Ven. fol., 1543, in the chapter on the "*oleum e pomis citrangulis*.")—The derivation of the word *Citrus* is doubtful. Zehetmayr (*Lex. etymol.*, p. 50) refers it to Sansk., *brihat-chitta* ("large-minded"!), which, according to native glossaries, is a name of the fruit. This is, of course, bungling. If it is an Indian word, it is probably simply *chitra*, "excellent, variegated, wonderful," which is also the name of various other plants. Possibly it is Indianized from the Chinese. The oldest Chinese term, occurring already in the Shu-king (about 800 B. Ch.; see *Bretschneider, On the Study, etc., of Chinese Botanical Works*, p. 11), is *kü* (*-kiuh*); this word, in passing into the Indian languages, may have received the very common noun-affix *tra*, and thereby have become *chitra*.

[15] *Fou-shau-kan*, "Buddah's head."

received the name of Adam's apple, sometimes wrongly called paradise-apple. The fruit of the latter is by some described as having near the navel a mark resembling a cicatrized bite.

According to the belief of the Jews,[16] this is the fruit which Adam tasted contrary to God's command in the Garden of Eden. Hence, it is used during the Feast of Tabernacles to embellish the huts, and as an ornament for the table. Various large varieties of citron are used for this purpose, but many orthodox Jews in Italy and Germany only use the fruit grown in Corfu, South Italy, and Sicily, which is packed in boxes holding 20–25 fruits, together with young leaves of the date-palm, and accompanied by a certificate of the chief rabbi of the place, that it is genuine and correctly gathered.

The Adam's apple (*Pomme d'Adam*) of the Paris shops (**44**) is different from the above, being a variety of eatable sweet orange. The Adam's apple of the Italians (**45**) is, according to Risso, the fruit of *Citrus Limetta*.

Candied Citron, whole (**53**). The large whole candied fruits, 8–9 inches long, which are occasionally found in the market, are called *Poncires* or *Poncines*.[17]

The Peel (**54**) constitutes a large proportion of the commercial lemon-peel (see **32**).

The Candied Peel (**55**) appears in the market in two forms. It is first soaked in salt water, then scalded, and boiled in syrup. When put in casks with the syrup, it constitutes the *Citronnat* (**56**). When previously dried, it is called *Succat* or *Succade* (**57**).

Lat.: Cortex Citri conditus. *Germ.:* Citronat, Citronate, Cedrat.

Essence de Cedrat (**58**) or Oil of Cedrat may be obtained from the rind of the fruit, best by the sponge-process. But it is not known to be made anywhere; and what there is in the market, is, for the most part, or altogether fictitious.

It is said that the essential oil of citron or cedrat is sometimes used as a sophistication or substitution for oil of lemon.

VII. THE SHADDOCK.

Citrus Pompelmos Risso, (*C. decumana* L.)
Habitat: China and Japan; from thence it extended to the Indian Archipelago and to Mauritius. It may also have been indigenous to Tahiti; for Captain Cook already found it there. Cultivated in South. Asia, Europe, and America.

The Fruit (**59**) weighs up to 12 pounds; is round or pear-shaped, sometimes flattened; has a smooth thick peel, containing ethereal oil, and a juicy agreeable sweetish-sour pulp. This is eaten, and recommended in the tropics particularly in diseases of acclimatization. The largest fruits are called *Pompelmousses* (**60**). Those of the smallest size constitute the *Forbidden Fruit* (**61**) of the English markets, particularly in the West Indies.

Engl.: Shaddock,[18] Pumelo,[19] Pompelmos (or -mousse) Paradise-apple, West *or* East India orange. *Fr.:* Pompoléon, Pampelmousse, Pamplemousse. *Germ.:* Pampelmus, Pumpelmus.

The Sublimation of Alkaloids, etc.*

ONE of the first to systematically employ sublimation as a means of recognition of alkaloids and other proximate principles, was Helwig.† His process, however, as well as those of his successors, were more or less faulty, either from want of uniformity in the temperature obtained, or from a want of agreement as to what should constitute a sublimate, or from other causes.

Mr. J. Wynter Blyth has reinvestigated this subject and proposes the following method:

A porcelain crucible about three inches in diameter, is nearly filled with mercury (for any temperature not much over 100° C.) or fusible metal (for higher temperatures); a minute speck, or two or three crystals of the subtance to be examined, is placed on a thin disk of microscopic covering glass, floated on the liquid, and the cell is completed by a glass-ring and upper disk. The porcelain crucible is supported on a brass plate fixed to a retort stand in the usual way, and protected from the unequal cooling effects of currents of air by being covered with a flask from which the bottom has been cut off. The neck of the flask conveniently supports a thermometer passing through a cork, and the bulb of which dips into the metallic bath. In the first examination, the temperature may be raised quite rapidly, the upper disk removed with a forceps at every ten degrees, and exchanged for a new one, until the substance is destroyed. The second examination is conducted much more slowly, and the disks exchanged at every four or five degrees, whilst the final determination is effected by raising the temperature with great caution, and exchanging the disks at about the points of change, already partially determined.

Mr. Blyth's definition of a sublimate is this:—The most minute films, dots or crystals, which can be observed by a quarter-inch power, and which are obtained by keeping the subliming cell at a definite temperature for sixty seconds.

For practical purposes the proximate principles of plants, in regard to their behavior to heat, may be classed into

[16] The Talmudic name of the Adam's apple is *ethrog* or *ethrunga* אתרוג, אתרוגנא, which, like the Persian *turunch*; Kurd., *torunch*; mediævo-Greek τερονάτζ, τουνάτζ, and the Arab. *utruch* or *utrâch* (Avicenna; Ibn Baithar) is a corruption of *nârandj*, "orange."

[17] Supposed to be a contraction of the words "*pomum citri*." It was already in use before Bauhin's time (see his *Pinax Theatr. Bot.*, p. 435).

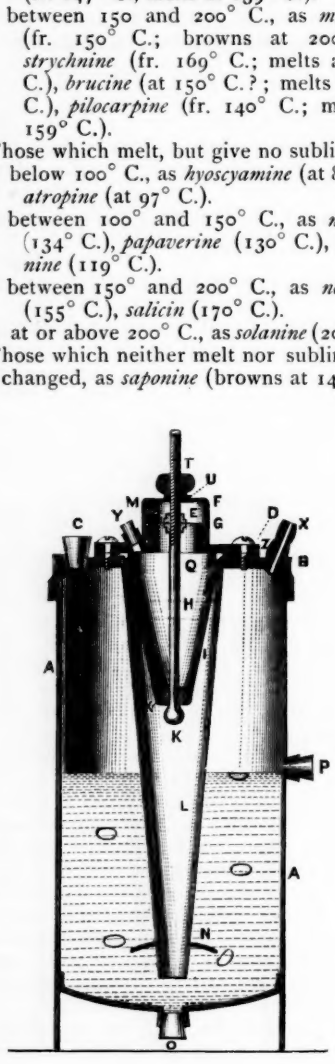
[18] So called after Captain Shaddock, who first brought it from China to the West Indies early in the 18th century.

[19] Pumelo is a contraction of "pomum melo" *melon-apple*.

* Abstract of a paper by J. Wynter Blyth in *Journ. of Chem. Soc.*, 1878, August, p. 313.

† *Helwig*, Das Mikroscop in der Toxicologie.

1. Those which give a decided crystalline sublimate:
   a) below 100° C., as *thein* (79° C. upwards; *cantharidin* (82° C. upwards).
   b) between 100° and 150° C., as *thebaine* (135° C. up.); *theobromine* (from 134° C.); *picrotoxin* (fr. 128° C.); "*quinetum*" (fr. 147° C., melts at 139° C.).
   c) between 150 and 200° C., as *morphine* (fr. 150° C.; browns at 200° C.), *strychnine* (fr. 169° C.; melts at 221° C.), *brucine* (at 150° C.?; melts at 151° C.), *pilocarpine* (fr. 140° C.; melts at 159° C.).
2. Those which melt, but give no sublimate:
   a) below 100° C., as *hyoscyamine* (at 89° C.), *atropine* (at 97° C.).
   b) between 100° and 150° C., as *narceine* (134° C.), *papaverine* (130° C.), *delphinine* (119° C.).
   c) between 150° and 200° C., as *narcotine* (155° C.), *salicin* (170° C.).
   d) at or above 200° C., as *solanine* (200° C.).
3. Those which neither melt nor sublime unchanged, as *saponine* (browns at 145° C.).



Carbonic Acid Generator.

THE adjoining generator for carbonic acid gas is the inventon of Mr. Otto Zwietuch, of Milwaukee, Wisconsin, and is intended to be used in carbonating lager-beer—a practice by no means uncommon at present. It contains some features of interest, however, for those who have occasion to manufacture the gas for other purposes.

In using it, the vent K is first closed by screwing down the weight-nut T and opening the orifices C, Y and P. Enough sulphuric acid is then poured in at Y so that, when all of it is consumed, there will still remain an excess of soda in the bottom of the generator A. The opening Y is then closed and into C a charge of bicarbonate of soda is put, then water is poured into the same opening until it rises to the level of P. All the openings are now closed, the weight-nut T is turned to the left and the valve K loosened. Part of the gas caused by the escape of the acid into the generator rises through the cylinder and the opening K into the acid chamber I and by pressing against the flexible diaphragm E, causing the rod H to rise and stop the exit of acid from the chamber. The balance of the gas rises to the top of the generator and escapes by the tube X. This latter vent is to be connected with the cask containing beer.

The design of the apparatus is that it should act automatically, and as soon as the pressure in the beer holder and in the top of the generator is diminished by the drawing off of the beer, the pressure in the cylinder L is correspondingly reduced. This permits the descent of the valve K and the diaphragm E, and of the escape of more acid. At no time will there be fluid in the cylinder L, if the opening Y has been carefully closed before the introduction of water into the generator. The gas, as it rises through the water in the generator, is washed from free acid.

Chloral Hydrate in Tetanus.

S. S. HARWOOD, M.D., reports in the *Pacific Medical and Surgical Journal* some interesting points in the successful treatment of a severe case of traumatic tetanus with chloral.

The spasms affected the whole of the body; the exciting cause being a neglected sloughing wound near the left heel. The patient was a man of intemperate habits, excitable disposition, and large frame.

1st. The tolerance of the drug was marked. A very large quantity was given hypodermically during twenty days, in doses varying from five to fifteen grains, at intervals of half an hour to four hours, with occasional relatively larger doses by the mouth. On one occasion 200 grains were administered subcutaneously and 100 grains given by the mouth from 9 P.M. to 9 A.M. On another, 240 grains at one dose by the mouth produced no lasting effect.

2d. Difficulty was experienced in bringing about absolute narcotism by hypodermic injections. Decided narcotism only occurred twice, and this not by this mode, but after large doses given by the mouth. In the first instance 100 grains in divided doses given within an hour and a half produced great relaxation of the muscles, including those affected by the tetanic rigidity. Nar-

cotism was complete, but transient; and was succeeded by symptoms indicating disordered cerebral circulation; active delirium, with frequent hard pulse, being especially marked. In the second instance it occurred from a dose of 240 grains, administered by mistake on the part of the nurse during commencing convalescence. Here it was extreme, but soon passed off, without treatment, leaving no unpleasant after-effect.

3d. A state allied to alcoholic intoxication was caused by the chloral. While taking it, the patient was always more or less in a state which an intimate knowledge of him enabled one to note as identical with that generally present during the second stage of alcoholic intoxication.

4th. During the treatment chloral was exhaled from the body of the patient in such quantities as to affect those in close attendance on him. Thus while breathing the air of the sick-room I felt considerable nauseating pain in the lower and back part of the head, accompanied by lassitude and impairment of muscular power, not readily accounted for otherwise. A gentleman and also a female were correspondingly affected. Fresh air soon removed these unpleasant and singular symptoms, but in each case they returned on again breathing the air of the sick-chamber. It is also worthy of record that the repeated hypodermic injections were followed in numerous instances by points of suppuration.

Death from Ergot Employed to Cause Abortion.

J. C. LINCOLN, M.D., of Bowling Green, Ohio, reports a case of the above-mentioned nature, in which the effects produced by the drug were swelling and discoloration of the lips and face, dilated pupils, anxious and alarmed expression of countenance, pulse of forty-eight and weak, cold extremities; purplish hue of skin over entire surface, persistent vomiting and purging, and an alarming degree of prostration. Coma supervened; action of heart became more feeble, breathing irregular, and death took place two days after the abortion occurred, and four days after taking the ergot, which was afterwards ascertained to have been in the form of fluid extract, and in quantity four ounces.

Picrate of Ammonium in Whooping-Cough.

DR. Z. T. DELLENBAUGH, having made use of picrate of ammonium as a remedy for whooping-cough, reports in the *Medical Times* that he has had ten or twelve additional cases, some of which were cured in from twenty-four to seventy-two hours, and he believes the remedy to be a specific for this affection. He gives to babies one-sixteenth to one-twelfth of a grain; to children, one-twelfth to one-eighth of a grain every three hours. He has also used it in one case of diphtheria in the form of a gargle of the strength of eight grains to the pint and by atomization. The picrate causes such a yellowish staining of the parts that he is inclined to think the cure dependent upon a destruction of the micrococci.

A NEW POULTICE.

BY S. P. SHARPLES.

A FEW days ago, I received a sample of water for analysis. The water was reported as being very useful in skin diseases. It had a slight smell of some organic compound in a state of decomposition, but on analysis proved to be remarkably pure; the total residue being only 2.03 grains in a U. S. Gallon, and of this .87 grains were organic. A few days after, the owner of the spring brought me a bottle filled with a light-brownish substance which he said was floating in the spring in such quantities that it had to be pushed to one side to get at the water. He said that the people about the spring used this scum as a poultice, and that it was very efficient.

On examination, this substance was found to be a mass of living diatoms, consisting mainly of *Coconema cistata*, with a few frustules of several other genera. I suppose the chief virtue of the application must be in the smell thereof, for, after keeping a few hours in a warm place, they do stink most fearfully.

BERLIN, MASS.

The Source of Thapsia.

IT will be remembered that about four years since it was announced that the plant yielding the silphion of the ancients had been rediscovered in one known under the name of "*drias*" in the Cyrenaica;* the claim was, however, disputed, and ultimately the plant proved to be only a form of the European *Thapsia garganica*. A comparative examination, by M. Yvon,† of the European and African plants, showed that the composition of the bark of the root was essentially the same, but he noticed that the resin of the African plant had a powerfully irritant action. This observation appears to have been turned to practical account, for the resin from the *Thapsia garganica*, or "bou nafa resin," as prepared for medicinal use, is exhibited as an industrial product in the Algerian house, together with a model of the apparatus used in its preparation. It is rather inefficiently described in the catalogue as being prepared "by distilling a mixture of alcohol and of the powder obtained by trituration of the bark of the root of the *bou nafa*."

In a communication received from M. Lallemand, of L'Arba, near Algiers, respecting this resin, it is stated that the *Thapsia garganica* plant has long been held in honor among the Arabs, who look upon it as a panacea. As a purgative, although a dangerously powerful one, small pieces of the dried root are eaten. But it is chiefly used as a revulsive in rheumatic and other pains, affections of the chest, etc. For this purpose the fresh root is grated and the milky juice that flows from it is rubbed on the

* *Pharm. Journ.* [3], vol. vii., p. 750.
† *Pharm. Journ.* [3], vol. viii., p. 162.

skin until a smarting is produced, which is followed by a swelling of the part and a characteristic miliary eruption. The thapsia has also an action approaching that of an emetic and differing from croton oil. The credit of introducing, or reintroducing, this drug into European medicine belongs to two French doctors, MM. Lereboulteau and Berthereaud, who extracted the resin from the root and prepared from it a plaster which in three years has won such favor that Algeria already exports annually for its manufacture, either as pure resin or dried roots, equal to forty tons of the fresh roots.

The pure thapsia resin is of an amber yellow color, and has a specific gravity rather greater than water. After immersion in water for some time at a temperature of 16° C. it can be worked between the fingers. It is soluble in alcohol, ether, carbon bisulphide, and in most ordinary solvents and in fatty bodies.

For the purpose of obtaining the resin, the plant is collected in the spring and the root is cut into slices by a special machine, dried in the sun, and treated with boiling alcohol; the alcohol is then distilled off and the residuary resin is purified by treatment with water. All these operations are dangerous, or at least inconvenient, to the operator, since the alcohol vapor becomes charged with a volatile principle which upon coming into contact with the skin causes a swelling and an erythematous eruptions that prevents the operator from continuing long at work. In order to overcome this inconvenience M. Lallemand contrived an apparatus, in which the operation is carried on without the vapors becoming diffused in the atmosphere.

When the charge is exhausted, water is run into the displacement apparatus, and steam heat being again applied any spirit still retained by the roots is recovered. The product is a brown transparent and brittle resin which gives off a peculiar aromatic odor when burnt.

Alstonia Constricta.

A. CATHEART, M.D., a resident of New South Wales, reports that *Alstonia constricta*, known by natives as "Bitter Bark," and indigenous to Australia, is in common use as an antiperiodic It is found growing in the "scrubs" of the interior and occasionally in open forests. The bark is thick, yellow, deeply fissured and intensely bitter. In Australia it has been used in place of hops to render beer bitter, and as a domestic remedy for malarial fevers. By the up-country shepherds it is sometimes called "native quinine."

[In the Philippine Islands the *Alstonia scholaris* furnishes the Dita-bark, a very powerful febrifuge concerning which we have already made mention in NEW REMEDIES—Vol. v., p. 146, and p. 209 in present volume.]

MISCELLANEOUS CONTRIBUTIONS FROM THE ORIENT.

BY PROF. XAV. LANDERER,

of Athens, Greece.

SAFFRON AND SALEP.—If the necessary care were bestowed upon the protection and cultivation of the saffron-crocus, Greece and the Hellenic islands would be able to supply considerable quantities. Among the latter, the islands of Naxos and Thermia furnish a considerable quantity. The women there gather the saffron, sew it into small bags, and sell it to the merchants of Syra (Hermupolis) at the rate of 30 to 40 leptas per drachm, or 6 to 8 cents per gramme. The most is collected upon the small Turkish island Simmi, and upon Chios, whence it is carried to Smyrna. It used to be much cultivated once upon Mount Athos (Hagion Oros, ἅγιον ὄρος, holy mountain), but has gradually fallen into such neglect that it may be said to be almost exterminated. All the saffron at present collected in Greece and in Macedonia probably amounts to only 50 or 60 kilos. Adulterations such as they are fancifully described in pharmacological works, are never met with.

Salep is likewise becoming exceedingly scarce, and its price has risen greatly in consequence. A quantity which thirty years ago cost 2 drachms (2 francs; 38.6 cents) now costs 18 drachms ($3.47), and a great deal of it has to be imported from Germany or from Smyrna.

The following species of crocus and of salep-orchis occur in Greece and Thessaly: *Crocus sativus*, *C. vernus* and *C. minimus*. *Orchis Morio*, *O. undulatifolia*, *O. papilionacea*, *O. mascula*, and *O. palustris*.

GREEK MARBLE.—Prof. Landerer, as member of the Greek Commission to the International Exhibition at Paris, requests us to draw attention to the rich mineralogical collection which will be on exhibition, containing treasures which are almost as yet unknown. He also desires to invite inspection of a very peculiar kind of marble, which, when polished, looks as if it had been spattered over with ink-stains. These spots are caused by the shells of a species of snail, *Cerithium giganteum*.

AILANTHUS GLANDULOSA.—The "tree of heaven," as it is called, which in its home attains a height of 80 to 100 feet, is used in Greece as an ornamental roadside tree, but during the period of flowering it gives off very disagreeable odors, whence it might more aptly be called "stink-tree." In this respect it resembles the stinking-bean trefoil, *Anagyris fœtida*. Many years ago the bark of Ailanthus was praised as a remedy for tapeworm. My own experiments convinced me of its usefulness, at least in dogs, to whom I administered a saturated decoction of the fresh bark. Hunting dogs, imported from western Europe into Greece, are very apt to be affected with tapeworm, when they rapidly

become emaciated and die, unless speedily relieved.

On Hard Waters.—A great many of the fresh waters met with in Greece and the Orient contain lime or magnesia (that is, are hard), and are unfit for drinking or washing. This water is called by the people morra or "sickening." It may be made drinkable by mixing it with rhaki (ῥακί, brandy), and it was only in this manner that I could ward off dysentery when visiting the opium-districts in Asia Minor. In consequence of the loosening effect of these waters, they are called *Glypho-nera tsirloneria* ("purgative drinking-waters"). The foreign salts may, however, also be removed by the cautious addition of sodium carbonate.

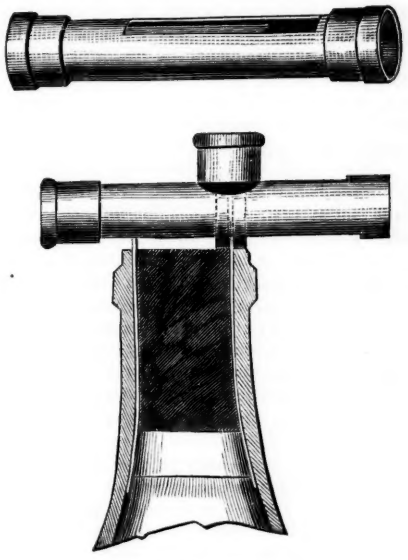
On the Acantho-mastix.—A very interesting and beautiful plant grown in Greece and the islands of the Archipelago is the *Atractylis gummifera* L., which exudes a viscous excretion, somewhat resembling mastix, and used by the women as a masticatory in place of the latter. The root has on several occasions caused fatal poisoning.

On the Poisoning of Fish with Spurge Euphorbia.—The employment of euphorbia for stupefying fish, so as to make them easier of capture, is forbidden in Greece under heavy penalties. This is necessitated by the practice of fishermen to place bunches of euphorbium (φλόμος phlomos) into the shallow bays along the seacoast, which enables them to catch them with their hands. These fish, which are called *phlomiasmena psaria* (from a verb derived from φλομος, meaning "euphorbized," and ψάρια, plural of ψαρι, fish) soon begin to putrefy, and when eaten cause diarrhœa and vomiting. The species of euphorbia commonly occurring in Greece are: *E. Helioscopia, E. Peplis, and E. Dendroides*, which latter attains the size of a small tree or shrub, and from the branches and leaves of which an acrid poisonous gum exudes. Formerly, all countrypeople in the Osmanic Empire were compelled by law to destroy, during the month of April, all poisonous plants growing in their neighborhood, such as Euphorbia, Cicuta, Hyoscyamus, Datura. This law was strictly obeyed up to 1833–34, but since then has remained a dead letter. Another species often found is Euph. Apios, the pear-shaped root of which was used as a strong cathartic by the shepherds. These plants are also known by the name *galatzidæ* (γαλατζίδαι, from γάλα gala, milk).

Insect Powder.

Why the flowers of the composite plants *Pyrethrum carneum* and *P. roseum*, when pulverized to form the well-known "Persian Insect Powder," should prove so destructive to insects, while perfectly innocuous to other forms of animal life, has not hitherto been understood. Rother, who has investigated the chemical composition of *P. roseum*, ascribes its active powers to the presence of an acid, or, more properly, of a glycoside, which he terms persicin. It is a brown non-crystallizable substance, having the odor of honey, and when boiled with hydrochloric acid is converted into sugar and persiretin. With alkalies it forms a neutral amorphous salt as well as an acid crystallizable one.

Persiretin also behaves like an acid. The plant contains in addition an oily resin-like acid, persiretin. No alkaloid was found by Rother; Bellerone, however, obtained from the plant a crystallizable substance which exhibited exceedingly acetic properties. Hager, who has examined the flowers of both *P. carneum* and *P. roseum*, attributes their insecticide effects to the presence of two substances, one of which, a body allied to trimethylamine, is combined with an acid in the flower. This powder, as well as the pollen, has a peculiarly powerful effect as an irritant. Hager finds that aqueous or alcoholic extracts of the powdered flowers contain little of these ingredients, and, consequently, are of no value as insecticides.



A New Cork-drawer.

Among the minor novelties which the Paris Exhibition offers, a new corkdrawer appears to deserve mention. It consists of a hollow handle and two metallic strips; one of the latter is pushed down between the cork and the neck of the bottle on one side, the other on the opposite side. The handle is then applied, as shown in the cut, and, owing to the smoothness with which the metallic strips slide on the glass, even the tightest cork may be extracted, without damage, from the bottle.

The chief use of this cork-drawer is to save the loss of a large quantity of corks in case a large

number of bottles of wine, as it sometimes happens, is found to have deposited a sediment, and requires refilling. The corks may be withdrawn uninjured and may be re-inserted afterwards.

On the other hand, this new cork-screw is likely to become an instrument of dishonesty with others, since it will enable them to refill wine-bottles repeatedly, and to re-insert the original branded corks, thus palming off inferior wines for the better brands, after the original bottles have once been emptied.

Iodine as a Substitute for Quinia.

FORDYCE GRINNELL, M.D., Physician to the Wichita Agency, Indian Territory, writes to the *Lancet and Clinic* regarding his experience in the use of iodine in the treatment of malarial affections (see, also, p. 234, of NEW REM.), that, although the statements made regarding the value of the remedy seemed extravagant, he made a trial, as follows :

"Malarial diseases were prevailing extensively. I was using quinia at the rate of one ounce per day, and my stock was almost exhausted ; I began by giving 10 drops of the tincture in a half glass of sweetened water three times daily to adults, proportional doses being given to children. *I have been astonished and delighted with the results.*

"I have thus treated in all 135 cases of intermittent fever, 74 being males and 61 females. These have included children, and in some instances infants in arms. The quotidian and tertian types of the fever were the forms principally presented. I have also treated four cases of diarrhœa (malarial), and eight cases of neuralgia (malarial), using the same remedy—only adding astringents or opiates in cases of diarrhœa, and narcotics in the neuralgia cases. One-hundred and forty-seven cases have thus far been treated with the iodine, and *the results have been fully equal to those treated with the sulphate of quinia.*

"In many of these cases the paroxysms did not return after the first dose, though I directed that the remedy should be continued some days after their cessation. In no case so far as reported has it proved an entire failure, but in a few instances the paroxysms have recurred two or three times, necessitating a greater persistence in the use of the remedy.

"In those cases accompanied by enlarged spleen I have thought the relief more marked at once than when quinine was used.

The Indians much prefer it to quinia, as it is by far more agreeable to take. This with them—and especially the children—constitutes quite a potent argument in its favor.

"The nationally of those treated—embraced the white, the Indian and the negro races. The Indians predominated, though there were a number of each of the other classes treated.

"I at once reported the favorable results of this 'substitute' to my friend Dr. Irving W. Smith, physician to the Kiowa and Comanchie Agency. A note from him of the 14th inst. says: 'I have tried the new remedy in a number of instances, with both red and white patients, in each instance with complete success so far as known. I have only a few ounces of quinia or cinchonidia and regard the new remedy as a special blessing at this time. I have added the tincture to simple syrup, a drachm to the ounce, with enough iodide of potassium to prevent precipitation on the addition of water.'"

The Use of Salicylic Acid in Acute Rheumatism.

DR. S. W. GILLESPIE, of Sterling, Ill., has taken the trouble to collate a number of facts connected with the use of salicylic acid as a remedy for acute rheumatism, which he publishes in the *Chicago Med. Journ. and Exam.* We quote the table which he gives as a summary.

NAME.	Number of patients.	Average time patient sick in days.	Ave. time pain was relieved in after treat. commenced	Ave. time taken to reduce temp. Hrs.
Dr. Sawyer, Eng.....	3	12	4	6
Dr. Clark, N. Y.....	5	7	4	—
Dr. Perrin, Mich.....	3	12	2	—
Leeds Infirmary.....	9	—	2	—
Prof. Traube.....	14	—	3	48
Dr. Stricker, Berlin.....	14	—	2	—
Dr. Jacobhouse.....	45	—	3	24
M. Sée, Paris.....	52	13	3	48
Cook Co. Hospital.....	18	22	3	—
St. Joseph's Hospital.....	4	—	2	—
Other cases.....	33	16	3	24
Total.....	200	Ave. 13.5 days.	Ave. 2.8 days.	Ave. 30 hours

NOTE.—In the blank places the time was not given.

Perfumed Iodoform.

MR. G. N. KEYWORTH, at the Dublin Pharmaceutical Conference, described a method of preparing a perfumed iodoform. Since the recent publication in the *British Medical Journal* of the papers by Mr. Berkeley Hill and others on the therapeutical use of iodoform, this drug has come into considerably increased use. Its somewhat pungent, volatile, and unpleasant odor has proved to be an obstacle which some have endeavored to overcome by the use of a collodion film, others by the combination of tannin. Mr. Keyworth's perfumed solution is prepared by shaking tincture of iodine with a fragment of fused potash until the color is removed, and covering the odor of the iodoform produced by the addition of Eau de Cologne or lavender water. The author also speaks of lint that has been dipped in this liquid, and afterwards dried, as being a very good application to indolent sores.

On the Action of Tonics.

THERE can be no doubt that the word "tonic" conveys a certain meaning both to doctor and patient, definite enough in one way, but very vague in another. Both understand that the tonic will increase the strength, and remove the weariness and languor, but how it does so probably neither has attempted to find out. On turning to Pereira we find that tonics are defined as agents which increase the tone of the system: but if we inquire further what is meant by tone, and what by the system, it will not be quite so easy to give a definite answer. Perhaps the easiest way of doing this is to take the want of tone, as we term it, for which tonics are administered, and to analyze the various symptoms which we find. First of all, then, there is a feeling of languor and disinclination to exertion, mental or bodily. The person may be roused by some excitement to make considerable exertions, but these are succeeded by a greater than usual feeling of fatigue; the appetite is generally diminished, the pulse is softer and more compressible than usual. Not unfrequently, too, there is less power than usual to resist the attack of disease. Want of tone, then, assists in diminishing functional activity of the muscular, nervous, circulatory, and digestive systems, and a tonic is something which will increase this activity. Some tonics, however, act more on one system than another; and so we have vascular tonics, nervous tonics, and digestive tonics; as well as general tonics which seem to influence all the systems together.

The first class of tonics, gastric or digestive tonics, enable the patient to take more food, and with a greater relish. The most typical examples of this class are the so called *bitter tonics*, such as colombo, quassia, gentian, cascarilla, and hops, either alone or in the form of bitter beer. In the mouth, these drugs produce a transient bitter taste, and increase the secretion of saliva. Thus they will tend to aid the digestion of starchy matters. In the stomach they cause a slight irritation, and the stomach, not having the same power of discriminating sensations that the mouth has, feels this, not as bitterness, but as appetite; unless the dose of the bitter should be too great, or too concentrated, and then it is felt as nausea, and is followed by vomiting. The appetite, however, which small doses excite, induces the patient to take more food, and to take it with greater relish. The increased relish is not to be disregarded. It would not be the same thing if the patient were simply to cram down, against his inclination, the same amount of food which he takes after his appetite has been excited by a tonic. We have not yet succeeded by pharmacological experiment in ascertaining precisely the effect of different emotions upon the stomach, but there can be little doubt that the pleasant feeling resulting from gratified appetite aids digestion, while that of disgust and satiety interferes with it.

Experiment has not shown that bitters increase the secretion of gastric juice in the same way that they do that of saliva, but they have an important action in lessening the tendency to putrefaction in the stomach. It is not impossible that in this way they prevent the formation during digestion of such substances as butyric acid, which is a direct nervous poison, and which, when absorbed into the circulation, would of itself tend to cause weakness and debility. It must not be forgotten that a man may be poisoned by substances formed in his own intestines, as well as by poisons taken into them by the mouth.

We all greatly dread the inhalation of sewer-gas into the lungs, but probably very few of us think that noxious gases formed in the stomach and intestines are readily absorbed by the blood, sometimes producing very serious results, and probably in many other cases leading to weakness and depression, the cause of which is never suspected. Experiment has shown that bitters, if they do not increase the secretion of gastric juice, at least tend to diminish secretion of the mucus, and thus diminish, as well as by the antiseptic action just mentioned, the fermentation which mucus is apt to set up. It has been found by Köhler that even simple bitters in large doses will raise the blood-pressure by acting on the vaso-motor centre. It is doubtful whether they do so in the small doses usually administered or not, but there are other remedies—so called vascular tonics—which combine this action to a considerable extent with one upon the stomach.

Thus, infusion of *digitalis* does not greatly increase the secretion of saliva, or produce a feeling of appetite in the stomach. It acts, in its absorption, upon the vaso-motor centre and upon the heart, rendering cardiac pulsations slower, and more powerful by contracting the vessels, and thus making the pulse firmer and less compressible. This improvement in the circulation makes itself felt in every organ of the body. Thus the stomach is relieved of congestion, digests the food more easily, is less liable to secrete mucus, and is much less apt to be distended by flatulence. This is perhaps best marked in cases of mitral disease, where the venous congestion which accompanies such a condition often leads to an accumulation of flatus, sometimes termed by patients heart-wind. The pathology of this condition has not been precisely made out, but we must not forget that interchange of gases goes on between the blood in the capillaries of the stomach and the gas contained in its cavity in the same way, though to a much less extent, as between the blood in the capillaries of the lung and the air contained in the pulmonary alveoli.

The action of another drug, very different

from digitalis, namely, *charcoal*, upon flatus of the stomach, is very marked, and is usually ascribed in text-books to the power which the charcoal possesses of absorbing gas. But charcoal only does this when it is dry; it loses its power when moist, and it seems incredible that a teaspoonful of charcoal swallowed after a meal and mixed with the contents of the stomach, including perhaps a pint of beer, in addition to all the gastric juice, should, after being churned up with the food in the stomach, absorb so much gas as to have any effect whatever upon the flatulent distention. It seems much more probable that its action is simply mechanical, and that by the small insoluble particles acting upon the mucous membrane, the circulation through it is so stimulated that the blood, flowing more rapidly through the vessels, absorbs and carries away a part at least of the accumulated gases. In respect, then, of its action upon the circulation in the stomach, charcoal may have some similarity to digitalis, but here the similarity ends. Charcoal has no action upon the heart. It cannot restore the balance of the circulation like digitalis, and it has none of the general effects upon the heart and vessels produced by the friction in the wet sheet so well described by Dr. Winternitz.

The improved circulation produced by vascular tonics makes itself felt in the liver and intestines as well as in the stomach. The yellow tinge, indicating biliary congestion, will disappear from the eye, and hæmorrhoidal engorgement will be lessened or removed. The brain and nervous centres, under the influence of a freer current of blood, act more readily and powerfully, thought comes with less effort, and exertion, both mental and bodily, can be continued for a much longer time, without any sense of fatigue. Two conditions also disappear, which, although apparently contradictory, afflict debilitated persons at the same time. These are drowsiness and sleeplessness. Frequently do we hear debilitated patients complain that they are so heavy for sleep that when sitting in their chairs or going about their work an irresistible drowsiness comes over them, and they fall asleep in the midst of an unfinished task, but when they lay their heads on the pillow and seek rest the conditions are at once reversed, drowsiness disappears, they toss about from side to side in the vain attempt to fall asleep, and perhaps it is not until they get up and walk about for a little that they are able to effect their purpose. Both of these conditions, apparently so dissimilar, depend upon the atonic condition of the vessels, so that instead of resisting the pressure of blood within them, they yield before it. In consequence of this the blood gravitates, while they are in an upright position, to the vessels of the abdomen and legs, leaving the brain anæmic and thus inducing sleep. On the other hand, when the horizontal position of the patients allows the blood to flow more easily to the head, the carotids and their branches, instead of contracting and keeping back the blood, allow it to circulate rapidly through the brain, and thus the unfortunate patient, unable to think at the time when he wishes to, is plagued by a rapid and incessant flow of ideas at the very moment when he least desires them. By giving digitalis so as to excite the vaso-motor centre, the vessels are made to contract moderately, they no longer yield to the pressure of the blood, and thus the blood is prevented from gravitating to the abdomen and lower limbs, and a free circulation through the brain enables it to discharge its functions satisfactorily, notwithstanding the force of gravity which in the upright position always tends to make it anæmic. Again, when the patient retires to rest, the blood, which tends in a horizontal posture to rush towards the brain, is checked in its course by the carotids and their branches, which under the influence of the vaso-motor centre, stimulated by the vascular tonic, contract and regulate the cerebral circulation so as to allow only sufficient blood to pass to the brain for the purpose of nutrition, but not enough for functional activity.

It seems highly probable that a similar action is exerted upon the vessels of the spinal cord, and that thus the patient feels increased vascular power and is equal to more prolonged exertion.* But this is not all, for the subcutaneous cellular tissue, and probably also the muscles themselves, are also benefited by the improved circulation. In the case of the subcutaneous tissue, the improvement is visible and palpable, as it is also in the muscles, though perhaps rather less plainly. In persons suffering from debility, even although there be no cardiac disorder, we find the feet swollen at night, so that the patients complain of their boots being too tight, and the ankles may be seen to pit upon pressure. Under the action of vascular tonics this condition will disappear, the ankles no longer swell, and deep and continuous pressure produces little or no mark upon the skin.

Another most valuable tonic, *strychnia*, has an action even more widely extended over the body than digitalis. It is at once a gastric, vascular, and nervous tonic; it aids digestion like other simple bitters in the way already described. It has, with the exception of quinine, a more powerful action than most other bitters in preventing putrefaction. It excites the sensibility of the vaso-motor centre, thus exerting a beneficial effect upon the circulation, and likewise

* For a fuller explanation of the *modus operandi* of contraction of vessels in the cord in increasing muscular strength, we may refer to a paper on the curative effects of mild and continued counter-irritation of the back in cases of general nervous debility and in certain cases of spinal irritation, by Arthur Gamgee, M.D., F.R.S., in the *Practitioner*, vol. xviii., p. 113.

directly stimulates the nervous tissue of the spinal cord itself. So great is its effect upon the vaso-motor centre that by its means physiologists have discovered that, instead of being confined to the medulla oblongata, as was formerly imagined, this centre extends down the spinal cord. It has just been said that an impression made upon the sensory nerves, reflexly stimulates the vaso-motor centre, contracting the vessels and raising the blood-pressure, but when a cut is made across the spinal cord just below the medulla oblongata, this result is not produced. From this experiment it has been concluded that the vaso-motor centre was entirely confined to the medulla oblongata above the place of section; but if a little strychnia be now injected into the veins of an animal in which the cord has been thus divided, and a sensory nerve be then irritated, the vessels will contract and the pressure of the blood will rise. It thus becomes evident that the vaso-motor centre extends down the cord from the medulla, but that its spinal portion is so feebly developed that under ordinary circumstances it has no power to contract the vessels when reflexly excited by stimulation of the sensory nerve. But strychnia has the power to increase its excitability so much, that reflex stimulation in this way will produce through it a decided effect. Now when we consider that sensory impulses are proceeding every moment from the skin to the vaso-motor centre, we can readily perceive how a slight increase in susceptibility produced by strychnia will have a wonderful effect in raising the tone of the vessels, and aiding the circulation. The mode in which quinine acts is not so clear, but we know from observation, that, also in small doses, it renders the pulse stronger and less compressible.

We have now seen how tonics may increase the quantity of nutriment taken into the body generally, how by their action on the vessels they quicken the circulation of intercellular fluid in the tissues, and by thus aiding its oxidation, and removing the products of waste, they greatly increase the functional activity of the various organs of the body.

We have now to consider how they effect the removal of waste from the body generally. The intercellular fluid in which these products are contained is absorbed into the general circulation by the veins and lymphatics. Unless some provision were made for its removal, it would soon accumulate in the blood and arrest the functional activity of the various tissues, beginning with that most susceptible of all, the nervous tissue, causing death. But these substances in all probability undergo further oxidation in the blood after their absorption and before they are finally excreted. This oxidation will be assisted if the respiratory movements by which oxygen is taken into the lungs are rendered deeper and more frequent, and also if the blood itself should require greater power to absorb this oxygen. Now strychnia has an action upon the respiratory centre in the medulla oblongata similar to that which it exerts upon the vaso-motor centre, and under its action respiratory movements become both quicker and deeper. No such effect is produced on the medulla by such a tonic as iron, but under the influence of this remedy the blood corpuscles not only become greatly increased in number, as was shown by Dr. Gowers in a recent paper in the *Practitioner*, vol. 20, page 1, but they also contain a great amount of hæmoglobine. Oxygen is thus more rapidly carried from the lungs to the tissues, and the process of combustion can thus go on more readily, both in the tissues themselves and in the minute blood-vessels into which the products of waste have been absorbed. The rise in blood-pressure which occurs under the influence of the tonic not only affords, as we have just seen, the most favorable conditions for oxidation in the tissues and for the removal of the products of waste from them, but it also assists in their elimination from the body itself. It has been shown by Ludwig and his scholars that the secretion of urine is, generally speaking, proportional to the pressure of blood in the renal glomeruli, and thus the pressure would rise along with the tension in the vascular system generally. The contraction of the vessels which tonics produce will therefore raise the tension in the kidney as well as in other parts of the body, and thus aid in the elimination of the products of waste.

From what has just been said, then, it would appear almost that strychnia or nux vomica is one of the most valuable tonics which we possess. When combined with nitro-hydro-chloric acid it is perhaps one of the most efficient remedies that we can give for the debility which is so often noticed in warm weather, and when the ordinary tonics, such as gentian, columba, cascarilla, or quinine do not produce the desired results, the addition of a little nux vomica or strychnia to them may give us the wished-for effect.—T. LAUDER BRUNTON, M.D., *in The Practitioner.*

Picric Acid a Reagent for Hydrocyanic Acid.

ACCORDING to Hlasiwetz, the addition of picric acid, or a picrate, in proper proportions, to a solution of an alkaline cyanide, produces a magnificent red coloration, which is owing to the formation of an isopurpurate, or a species of artificial murexide. 0.01 gramme of picric acid and 0.004 gm. of potassium cyanide, dissolved in 11 cc., still give a decided reaction; so also milk, containing 0.0025 gm. of hydrocyanic acid in 1 cc., etc. Guyot has observed that in presence of mustard this reaction does not take place, while it did not fail to make its appearance under all other circumstances.—*Rép. de Pharmacie.*

Plants Indigenous to or Naturalized in North America.

[The names in *italics* denote such plants as are introduced from other countries, and have either become entirely naturalized, or are at least extensively cultivated. Some, like Lycopodium, Uva Ursi, etc., are probably indigenous to all northern countries.]

Abies bals.—Abies Canad.—*Ailanthus.*—Absinthium.—Achillea.—Aletris.—Apocynum (andros. and cannab.).—Aralia.—Asarum (Can.)—Arum (triph.).—Asclepias (Corn., incar., tub.).—*Azedarach.*—Baptisia.—*Belladonna.*—*Berberis.*—*Buxus.*—*Calamus.*—*Cannabis sativa.*—*Carota.*—*Carthamus.*—Cassia (Maril.).—*Cataria.*—Caulophyllum.—*Chelidonium.*—Chelone.—Chenopodium.—Chimaphila.—Chondrus crisp.—Cimicifuga.—*Citrus* (*Aur., Lim., vulg.*)—*Conium.*—Coptis.—Corydalis.—*Cotula.*—Cypripedium.—Diospyros.—Dracontium.—*Drosera.*—Erigeron (het., Phila., Canad.).—Eriodictyon (Yerba Santa).—Euonymus.—Eupatorium.—Euphorbia.—*Filix Mas.*—Frasera.—Galium (Apar.).—Gaultheria.—Gelsemium.—Gentiana (Catesb.)—Geranium.—*Geum* (*riv.*)—Gillenia.—Grindelia.—Hamamelis.—Hedeoma.—Helianthemum.—Helonias (dioica).—Hepatica.—Heuchera.—Humulus.—Hydrangea (arbor.).—Hydrastis.—*Inula.*—Iris (vers.).—Jeffersonia (diph.).—Juglans.—*Juniper* (*comm.*).—Juniperus. (Virg.).—*Lappa.*—Leptandra.—*Linum.*—Liriodendron.—Lobelia.—*Lycopodium.*—Lycopus (Virg.).—Magnolia.—*Marrubium.*—*Melissa.*—*Mentha* (*pip., vir.*)—Monarda.—Panax (Ginseng).—*Pepo.*—*Petroselinum.*—Phytolacca.—Pinus (pal., Tæda).—Podophyllum.—Prinos.—Prunus Virg.—Quercus (alb., tinct.).—*Ranunculus* (*bulb.*).—Rhus (glab., Toxic.).—*Rosmarinus.*—Rubus (vill., Canad.).—*Rumex.*—*Ruta.*—Sabbatia.—*Sabina.*—*Salix* (*alb.*).—*Salvia.*—Sambucus.—Sanguinaria.—Sarracenia (purp.).—Sassafras.—Scutellaria.—Senega.—Serpentaria.—*Sinapis.*—Solidago.—Spigelia.—Spiræa.—Statice.—Stillingia.—*Stramonium.*—Tabacum.—*Tanacetum.*—Thuja (occ.).—*Thymus* (*vulg.*)—Trillium (erect., pend.).—Triosteum.—Ulmus.—*Uva Ursi.*—*Valeriana* (*off.*).—*Verbascum* (*Thaps*)—Viburnum (prunif.).—Veratrum viride.—Viola (ped.).—*Vitis* (*vinif.*).—Xanthorrhiza.—Xanthoxylum, etc.

Plants Indigenous to or Naturalized or Cultivated in Great Britain.

[There being much diversity of opinion, in the case of many of these plants, whether they are really natives of Great Britain, no distinction is made between them.]

Achillea.—Aconitum.—Anethum.—Angelica.—Anthemis.—Armoracia.—Asarum (Eur.)—Belladonna.—Carum.—Chondrus.—Colchicum.—Conium.—Coriandrum.—Digitalis.—Dulcamara.—Ecballium (from this: Elaterium).—(Ergota.)—Filix Mas.—Fœniculum.—(Galla).—Humulus.—Hyoscyamus.—Lactuca (from it: Lactucarium).—Larix.—Lavandula.—Linum.—Laurocerasus.—Mentha pip., Mentha vir.—Mezereum.—Origanum.—Papaver.—Quercus (ped.).—Rhamnus cath.—Ramnus frang.—Rhœas (Pap. Rh.).—Rosa.—Rosmarinus.—Ruta.—Sabina.—Salix.—Salvia.—Sambucus.—Scoparius.—Sinapis.—Stramonium.—Taraxacum.—Thymus.—Tormentilla.—Tussilago.—Ulmus.—Uva Ursi.—Valeriana.—Verbascum.—Viburnum (Opulus).—Viscum album., etc.

The Sources of Commercial Drugs.

[Names in *italics* are of drugs which are not officinal.]

Abies Balsamea.—North. U. S.—Canada.
Abies Excelsa.—Norway. Russia. Germany.
Abies Canadensis.—North. U. S.—Canada.
Acacia Gum.—West. Africa (Senegal). South. Nubia (Cordofan).—Egypt. Abyssinia.—The Cape.—Australia.
Aconitum Napellus.—England. Germany. Siberia.
Aconitum Ferox.—Himalayas.
Ailanthus.—China. (U. S.)
Aletris.—U. S.
Aloes.—1. Socotra.—2. Barbadoes.—3. Curaçao.—4. Cape.—5. Natal.
Almonds.—Persia. Morocco. Spain. Canary Isl. Italy. Portugal. France.
Amber.—The Baltic. India.
Ambergris.—Ocean and Coasts of Madagascar, Surinam, Java, Nova Scotia, etc.
Ammoniac.—Persia. Imp. by way of Bombay.
Anchusa.—France. Hungary.
Angelica.—England. N. Europe.
Angostura.—Venezuela. Imp. over Trinidad.
Anise.—Malta. Spain. France. Germ. Russia. Greece.
Anise (*Star*).—Annam. Prov. of Kuang-tung, Kuang-si, and Yunnan of China.
Apocynum (*andros.* and *cann.*).—U. S.
Aralia (*nudicaulis*).—U. S.
Arnica.—N. and S. Europe. N. Asia.
Arrowroot.—Bermuda. St. Vincent. Natal. West India. Brazil.
Asafœtida.—Persia. Affghanistan.
Asarum (*Canadense*).—U. S.—Canada.
Asclepias (*Cornuti, incarnata, tuberosa*).—U. S.
Azedarach.—Syria. Persia. N. India.—Cult. in South. U. S.
Bael.—Coromandel; West. Himalayas. Malabar.
Bals. Gurjun.—Chittagong. E. Bengal. Pegu. Burma. Siam.
Bals. Peru.—Balsam-coast of Rep. of San Salvador (West coast of Central Amer.) fr. Acajutla to La Liberdad.
Bals. Tolu.—Venezuela. New Granada.
Baptisia.—N. America.
Bay.—Italy. S. Europe. Asia Minor.
Bay-rum from *Myrcia acris.*—Jamaica and other W. Ind. Islands.
Belladonna.—England and Cont. of Europe.
Benzoin.—Sumatra. Siam.
Berberis (*vulgaris*).—Europe. (U. S.)
Bergamot.—Italy (Reggio in Calabria).
Betel.—Malay Archipelago. East Indies. Ceylon. Indo-China. Philippines.
Blackberry (*Rubus villosus*).—N. America.
Boldo.—Chili (Andes).
Brazil Wood.—Brazil. W. Indies.
Broom.—England. West. and temp. North. Europe.
Bryonia.—Europe.
Buchu.—Cape of Good Hope.
Buckthorn.—Europe. Siberia.
Butternut.—N. America.
Buxus.—Europe. West. Asia. (U. S.)
Cacao.—North. part of S. America. Mexico.
Caffea.—S. Arabia. Abyssinia.—Arabia. Java. West Indies. Trop. America. Ceylon.
Cajuput (Oil).—Ex. fr. Singapore and Batavia.

Calabar Bean.—Niger and Old Calabar River in Gulf of Guinea.
Calamus.—Black Sea Coast. Central Asia. India. N. America.
Camphor.—Central China. Formosa. Japan.
Canella.—West Indies (exp. from Bahamas). S. Florida.
Canna.—W. India Islands (St. Kitts).
Cannabis Indica.—Western and Central Asia.
Cantharis.—Russia. Hungary. Sicily. Spain.
Capsicum.—Prob. nat. of trop. Amer.—Zanzibar. West. Africa. Natal. Sierra Leone. Guiana (Cayenne).
Caraway.—North. and Mid. Europe and Asia. (Exp. fr. Finland. Norway. Germany. Holland. Morocco).
Cardamon.—Malabar coast. Ceylon.
Carota. Europe. North America.
Cascarilla.—Bahamas.
Cassia Bark.—China (exp. fr. Canton).
Cassia Fistula.—India. Egypt. Trop. Africa. W. Indies. Brazil.
Cassia Marilandica.—N. America.
Castoreum.—North America.—Russia.
Castor Oil (Ricinus).—India.—All tropics and sub-trop.—W. Indies. U. S. Italy.
Catechu Pallidum (*Gambier*).—Malay Peninsula (exp. f. Singapore).
Catechu Nigrum (*Cutch*).—India. Burma. Pegu.
Catnep.—Europe. U. S.
Caulophyllum.—U. S.
Chamomile.—Engl. Germ. France. Spain. Italy.
Chelidonium (*majus*).—Europe. U. S.
Chelone (*glabra*).—N. America.
Cherry-Laurel.—Europe.
China Root.—E. India. China. Japan. (Exp. fr. Canton.)
Chiretta.—N. India.
Cimicifuga.—U. S.
Cinchona Flava. (*C. Calisaya*).—Bolivia and S. E. Peru. Cult. in India. Java. Ceylon.
Cinchona Pallida. (*C. officinalis, etc.*). — Ecuador. Peru. Cult. in India. Java. Ceylon.
Cinchona Rubra. (*C. succirubra*). — Guaranda forests along west side of Chimborazo. Cult. in India. Java. Ceylon.
Cinnamon.—Ceylon.
Cloves.—Moluccas. Isl. of Zanzibar and Pemba on East coast of Africa.
Coca.—Bolivia (Andes).
Cocoa-Nut.—S. India. Trop. Africa and America.
Cocculus.—E. Indies. (Exp. fr. Bombay and Madras.)
Cochineal.—Honduras. Mexico. Teneriffe.
Cod-fish.—Seas of N. Europe and America. Caught on the coast of Norway, Newfoundland, Maine, etc.
Colchicum.—Mid. and South. Europe. England.
Colocynth.—Egypt. Nubia. N. Africa. Spain. India. Greece. Imp. fr. Mogador, Spain, and Syria.
Colombo.—E. Africa, betw. Mozambique and Quilimane.
Coltsfoot.—England and Continent of Europe.
Conium.—England. Mid. Europe. N. America.
Contrayerva.—Mexico. W. Ind. Peru. Brazil (the offic.).
Copaiba.—Northern S. America. (Exp. f. Pará, Maranham, Rio de Jan., Trinidad, Cartagena, Maracaibo.)
Copal.—Mexico. East Indies. Sierra Leone.
Coriander.—Mediterr. and Caucasus. England. N. Africa. India.
Cork.—Spain. Portugal. N. Africa (and recently in California).
Corydalis (*formosa*).—Mid. and W. U. S.
Coto Bark.—Banks of Mapiri in Bolivia.
Cotton.—South. U. S.—Cult. in Egypt, India, etc.
Cotula.—Europe. (U. S.)
Cowhage.—Trop. Africa and Amer. India.
Croton Tiglium.—Malabar. Cochin.
Cubebs.—Java. S. Borneo. Sumatra. (Exp. f. Singapore).
Cumin.—Upper Nile.—Arab. India. China. Europe.
Curare.—Prep. by Natives in Brit. Guiana.
Cypripedium (*pubescens*).—U. S.
Damar.—Java. Singapore.
Dandelion.—Europe. Asia. N. America.
Digitalis.—Europe.
Dill.—Mediterranean. S. Russia. Caucasus. England.
Dita Bark.—Philippines.
Dracontium. N. America.
Drosera.—Europe. U. S.
Dulcamara.—Europe. N. America.
Elaterium.—Prep. in England (and Malta).
Elder (*Sambucus Canadensis*).—N. America.
Elemi.—Philippines.
Elecampane.—Europe. U. S.
Elm (*Ulmus fulva*).—U. S.
Ergot.—Exp. from Vigo in Spain; Teneriffe; Hamburg; France.
Erigeron.—Europe. N. Amer.
Eriodictyon.—See Yerba Santa.
Euonymus.—North. and West. U. S.
Eupatorium.—N. America.
Euphorbia Corollata.—U. S.
Euphorbium (*gum*).—Exp. fr. Mogador.
Fennel.—Mediterranean.—W. Europe. England. India. China.
Fenugreek.—France. Germany.
Fig.—West. Asia. Spain. Italy. Portugal.
Frangula.—England. Continent of Europe.
Frasera.—South. and West. U. S.
Fucus (*vesicul.*).—Rocky coasts of Europe and America.
Galanga.—South. China. Exp. fr. Canton.
Galbanum.—Persia. Imp. fr. the Levant and India.
Galium (*Aparine*).—Europe. U. S.
Galls on *Quercus infectoria* in Asia Minor, Turkey, etc. Imp. fr. Aleppo, Smyrna, Tripoli, etc.
Gamboge.—Camboja. Siam. South. Cochin-China.
Garlic.—Sicily. Italy. South. France.—Cult. in other countries.
Gaultheria.—North America.
Gelsemium.—South. U. S.
Gentian.—Alpine dist. of Middle and South. Europe. Coll. in Switzerland, Tyrol, and Auvergne.
Gentian (Blue).—Middle U. S.
Geranium.—U. S.
Geum (*rivale*).—Europe. U. S.
Gillenia.—West. U. S.
Ginger.—Warm dist. of Asia. Introd. chiefly into West Indies. South Amer. Trop. West. Africa, and Queensland.
Ginseng (American).—North., Midd. and West. U. S.
Goa (*-Powder*).—Brazil. Exp. f. Bahia.
Goldthread.—North. U. S. Canada. North. Asia.
Grana Paradisi.—Trop. West. Africa.
Granatum.—N.-W. India. Persia eastward. Cult. in sub-tropics of Europe and America.
Grindelia (*rob.* and *squarr.*).—North. Pacific U. States.
Guaco.—Central and South America. W. Indies.
Guaiac.—Jamaica. St. Domingo. Hayti, and other W. Ind. Isl.
Guarana.—Brazil.
Gutta Percha.—Malay Peninsula. Borneo, and neighb. Islands.
Hamamelis.—N. America.
Hashish.—India. Persia.
Helianthemum.—U. S.
Hellebore, Black.—South. and East. Europe.
Helonias.—U. S.
Hemidesmus.—India. Ceylon.
Hemp, Amer.—*Cannabis sativa*, cult. in North America.
Henbane.—Continent of Europe. England.
Hepatica.—U. S.
Heuchera.—U. S. (New England to Carolinas.)
Hop—Native of N. America. Europe; extens. cultivated.
Horehound.—Europe. (U. S.)
Horsemint.—U. S.
Horseradish.—East. Europe. Cult. generally in Europe and N. America.
Hydrangea Arborescens.—Middle and South. U. S.
Hydrastis Canadesis.—U. S., chiefly North and West.
Ignatia.—Philippines. (Cochin-China.)
India Rubber.—Brazil. Guiana. Central America.

Ipecac.—Various Provinces of Brazil.
Iris Florentina.—Macedonia. S.-W. shores of Black Sea. Asia Minor. Cult. in N. Italy.
Iris Versicolor.—U. S.
Isinglass.—Russia.—Brazil.—U. S. (New England.)
Jaborandi.—Brazil (Pernambuco).
Jalap.—West. Mexican Andes. Imp. fr. Vera Cruz and Tampico.
Jeffersonia Diphylla.—Middle and West. U. S.
Juniper, Common.—Europe. Russian Asia. N. America.
Juniperus Virginianus.—U. S.
Kamala.—Abyssinia. S. Arabia. India. Malay Islands. Australia. E. China. Exp. f. Madras and Bombay.
Kava-Kava.—Polynesian Islands. Fiji Islands (belong. to Melanesian group).
Kino (true).—India. Ceylon. Cochin-China.
Kino, Red Gum.—Australia.
Kousso.—Abyssinia. Imp. fr. Bombay and Aden.
Kowrie Gum.—Australia.
Krameria.—Bolivian and Peruvian Cordilleras.
Lactucarium.—Clermont-Ferrand (In Auvergne, France). Rhenish Prussia. Scotland.
Lappa.—Europe. U. S.
Larch.—Central Europe. Gr. Britain.
Larkspur.—Europe. (U. S.)
Lavender.—South. Europe. Cult. in Germ., Engl., etc.
Lemon.—North. India.—Italy. Sicily. South. France, etc.
Leptandra.—U. S. (east of Miss.).
Lettuce.—S. and W. Europe. Cult. northwards.
Licorice.—S. Europe. Central Asia.
Linseed.—Cult. chiefly in Russia, India, Engl., Germ., U. S., etc.
Liriodendron.—U. S.
Litmus (fr. spec. of *Rocella*) ppd. in Holland.
Lobelia.—U. S.
Logwood.—Cent. America (Campeachy; Honduras).
Lycopodium.—Europe. Asia. America. Australia, etc. Coll. in Russia, Germany, Switzerland.
Lycopus (Virginicus.).—U. S.
Madder.—S. Europe. Levant. Cult. in Asia Minor, France, Holland, and S. Italy.
Magnolia.—U. S.
Male Fern.—Europe. Asia. Canada. California. Mexico. S. America. Africa.
Malva.—Europe.
Manna.—Sicily. Calabria.
Marshmallow.—Europe. W. Asia.
Mastiche.—S. Europe. N. Africa. Collected only in Isl. of Scio.
Matico.—Bolivia.—Peru. Brazil, etc. Imp. fr. Panama.
Melissa.—S. Europe. (U. S.)
Mezereum.—Europe.
Mistletoe (*Viscum album*).—Europe.—(*Phoradendron flavescens.*) U. S.
Moss, Iceland.—Arctic and Antarctic Reg. Mount. of Cent. Europe. Coll. in Sweden, Switzerland, Spain.
Moss, Irish.—Rocky sea-shores of Europe and N. Amer. Coll. on W. coast of Ireland, and coast of Mass.
Mulberry.—Asia Minor to Persia. Cult. in Europe and China, etc.
Mullein.—Europe. (U. S.)
Musk.—China (Tonquin. Yunnan). Russia (S. Siberia). India (fr. Thibet).
Myrrh.—Somali coast. East Africa (fr. Cape Gardafui westward). Imp. fr. Bombay.
Nectandra.—British Guiana.
Nutmeg.—Cult. in Bencoolen (Sumatra), Malacca, Bengal, Singapore, Penang. Mostly on the Banda Islands.
Nux Vomica.—India. Burmah. Siam.
Olibanum.—E. Africa near Cape Guardafui. S. Arabia.
Olives.—Italy, Sicily. Spain.—California.
Opium.—Asia Minor (exp. f. Smyrna or Constantinople). Egypt. Persia. [Europe.] East India [Patna and Benares, Malwa; etc.]. China.
Orange.—North. India.—S. Europe. Tropics and Subtropics generally.
Origanum.—S. Europe; France. England. [U. S.]
Palm Oil.—Guinea.
Pareira.—Peru. Brazil.
Parsley.—Sardinia. S. Europe.—Cult. generally.
Patchouly.—India. Malay Peninsula.
Pennyroyal.—U. S.
Pepper (black).—Malabar. Malay Archipel. Siam. Philippines. (W. Indies.)
Peppermint.—Gr. Britain.—Cult. in Europe. U. S.
Persimmon (American).—Middle and S. U. S.
Phytolacca.—N. America. [S. Europe. N. Africa.]
Pimento.—W. Indies, espec. Jamaica.
Pipsissewa.—Northern Amer. Europe and Asia.
Pitch, Burgundy.—Switzerland. Finland. Baden. Austria.
Pinus Palustris.—N. America.
Pinus Pinaster.—S.-W. France.
Pinus Tæda.—N. America.
Pistachio Nut.—Syria to Cabul.
Podophyllum.—U. S.
Poppy.—East. Mediterr.; Asia Minor. Cent. Asia. Cult. in England, etc.
Prinos.—N. America.
Prune.—Greece. Asia Minor.—[Cult. in France, etc.]
Prunus Virginiana.—N. America.
Pulsatilla.—Europe. Siberia.
Pumpkin Seed.—Asia. Cult. generally.
Pyrethrum (*Anacyclus Pyrethrum*).—Levant. Barbary. Mediterr. coast of Europe.
Quassia.—Jamaica, Antigua, St. Vincent (W. Ind.).
Quercus Alba.—U. S.
Quercus Pedunculata.—Gr. Britain.
Quercus Tinctoria.—U. S.
Quillaya.—Mount. dist. of Chili.
Quince.—W. Asia. [Cult. in S. France and Cape of G. Hope.]
Ranunculus Bulbosus.—Europe. U. S.
Rhœas.—Sicily. Greece. Dalmatia. Cult. in Europe and Asia Minor generally.
Rhus Glabra.—U. S.
Rhus Toxicodendron.—N. America.
Rocella.—Angola. Madeira. Madagascar. Canaries.
Rosa Canina.—Europe. N. Africa. Persia.
Rosa Centifolia.—Caucasus.—Cult. in Engl., Turkey, etc.
Rosa Gallica.—France, England, etc.
Rose, Attar of.—South. Balkans in Turkey. [France. India.]
Rosemary.—S. Europe. [Gr. Britain. U. S.]
Rubus (*Canadensis* and *villosus*).—N. America.
Rue.—S. Europe. [U. S.]
Rumex.—Europe.—U. S.
Sabadilla.—Mexico. Guatemala. Exp. fr. La Guaira.
Sabbatia.—Midd. and S. U. S.
Safflower.—India. Levant. Egypt. Cult. also in Europe and America.
Saffron. Greece. Asia Minor. Persia. Cult. in France, Spain, Italy, and England.
Sagapenum.—Persia.
Sage.—S. Europe. Cult. generally.
Sago.—E. Indian Archipelago.
Salep.—Cent. and S. Europe. Turkey. Caucas. Asia Minor.
Salix (*alba*).—Europe. [U. S.]
Sanguinaria Canadensis.—N. America.
Santalum (red).—India. Ceylon.
Santonica.—Regions of Don and lower Volga. Kirghiz deserts.
Sarracenia Purpurea.—U. S.
Sarsaparilla.—North. half of S. America. Central America. Mexico. (1. Honduras. 2. Brazil (Pará or Lisbon). 3. Guatemala. 4. Jamaica. 5. Mexico. 6. Guayaquil.)
Sassafras.—N. America.
Savine.—Mount. of S. Europe. [N. Asia. Brit. N. Amer.]
Scammony.—Syria. Asia Minor. Greek Isl. Exp. fr. Smyrna.
Scutellaria.—U. S.
Senega.—U. S. (chiefly S. and W.)
Senna, Alexandrian.—Nubia. Kordofan. Senaar. Imp. fr. Alexandria.

Senna, East Indian.—South Arabia; shipped to Surat and Bombay, thence to Europe.
Senna, Tinnevelly.—India (cultiv.). Imp. fr. Tuticorin.
Serpentaria.—Midd., S., and W. U. S.
Sesamum.—S. India.—Cult. in most warm climes. (Turkey, Greece, Sicily, Malta, Formosa, Zanzibar.)
Shellac.—Bombay. Calcutta. Singapore.
Simaruba.—W. Indies (Jamaica). Guiana.
Sinapis.—S. Europe. W. Asia.—Cult. in England. [U.S.]
Solidago.—U. S.
Spearmint.—Europe. [Asia. N. America].
Spermaceti.—Pacific, Indian Ocean, and China Sea.
Spigelia.—S. and S.-W. U. S.
Spiræa (*tomentosa*). U. S. (Chiefly New England.)
Sponge.—Bahamas. Grecian Archipelago.
Squill.—Coast of Mediterr. Mostly imp. fr. Malta.
Statice (*Limonium* var. *Caroliniana*).—East. U. S.
Stavesacre.—Italy. Greece. Levant.
Stillingia.—Midd. and South. U. S.
Stramonium.—(Nat. of bord. of Caspian Sea?) Europe. (England, Germany, etc.) America. Asia. (Cult. in England, U. S., etc.)
Styrax.—S.-W. Asia Minor.
Sugar.—(Nat. of India.) Cult. in South. U. S., West Ind., Brazil, etc.
Sumbul.—Mount. S.-E. of Samarkand.
Tamarinds.—India. Trop. Africa (and Austral.). Natural. in Brazil, Mexico, and W. Indies.
Tansy.—Europe. [U. S.]
Tapioca.—Brazil. (Cult. in other parts of S. Amer., W. Indies, and Liberia.)
Thea.—China. Japan.
Theobroma.—S. and Cent. America to Mexico.
Thuja occidentalis.—North. U. S. and Canada.
Thus (*Americanum*).—South. U. S.
Thyme.—S. Europe. Cult. in England, U. S., etc.
Tobacco.—America.—U. S., Cuba, Brazil, Turkey, etc.
Tormentil.—Europe.
Tragacanth.—Asia Minor. Syria. Armenia. Kurdistan. Persia. Imp. fr. Constantinople, Smyrna, and Pers. Gulf.
Trillium (*erectum*).—U. S. (chiefly North-west.)
Triosteum.—U. S.
Turmeric.—South. Asia. Imp. fr. Calcutta and Bombay.
Uvæ Passæ.—The commercial fr. Spain (Malaga); Syria (exp. fr. Smyrna); Greece (Corinthian, "currants").
Uva Ursi.—North. Europe, Asia, America.
Valerian. Europe. North. Asia. Cult. in Engl., Germ., Holl., New Engl., and New York.
Vanilla.—East Mexico. Cult. in Isl. of Mauritius and Bourbon.
Veratrum Album.—Mount. of Mid. and South. Europe.
Veratrum Viride.—North Amer. (Canada to Georgia.)
Viburnum (*prunifolium*).—U. S.—*Vib. Opulus.* Europe; [U. S.]
Viola Pedata.—U. S.
Vitis Vinifera.—Nat. of Caucas. prov. of Russia. Cult. generally.
Wormwood.—Europe. [U. S.].
Wormseed (*Chenopodium*).—Trop. America. [U. S.]
Xanthorrhiza.—South. and West. U. S.
Xanthoxylum (*fraxineum*).—U. S. more northw.—(*Caroliniarum*). U. S., more southward.
Yarrow.—Europe. U. S.
Yellow Sandal.—India (Madras Presid.). Isl. of Sumba and Timor, Sandwich and Fiji Islands.
Yerba Santa.—California.

NOTE.—In the alphabetical arrangement of the above list of articles, no systemetic nomenclature was followed. Each article will be found under its most *usual* appellation, whether this be the common English or the botanical or the officinal name. Those substances which are officinal in the U. S. Ph., or yield important drugs are printed in Roman; the others in *italics.*

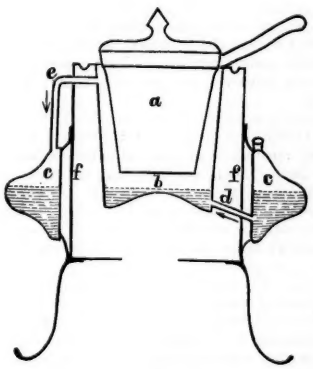
Rapid Drying of Filters.

MR. THOMAS AUSTEN recommends for this purpose *infusorial earth.* If a wet filter be laid upon a thin layer of this material, it will be found to have lost its moisture in an incredibly short time. The material is far superior to porous tiles, besides being more easily restored to its dry condition by ignition. In case it is important to prevent the adhesion of any foreign particles to the filter to be dried, the latter may be placed upon a second larger piece of filtering paper, before being laid on the earth.—*Chem. News.*

The Action of Morphia in Acute Uremia.

J. T. BONTELLE, M.D., remarks the prejudice which formerly existed against the employment of opiates in uræmia and refers to the article of Prof. A. L. Loomis in the *Medical Record* during 1873, in which it was shown that, instead of being harmful, the use of morphia hypodermically is correct in theory and beneficial in practice.

Dr. Bontelle reports three cases of children between the ages of 6 and 12 years, suffering with uræmic coma or convulsions, in which morphia was given hypodermically in relatively large doses with the effect of relieving coma, quieting restlessness and convulsions, and without interfering with the function of the kidneys or producing symptoms of opium poisoning.—*Virgin. Med. Monthly.*



New Infusion-Apparatus.

AN improved infusion-apparatus with constant water-level has been constructed by Dr. E. Hoffmann, of Kandel, Germany. It consists of the infusion-pot proper (*a*), an outer small boiler (*b*) with indented bottom, holding a small quantity of water (about 1 inch high), and external circular water-reservoir (*c,c*) of the capacity of about 1 litre, and communicating with the interior vessel through the tube *d.* On applying heat at the bottom of the boiler, steam is generated which passes through *e*, where it is almost completely condensed back into *c*, while a corresponding quantity of water re-enters the inner boiler through *d.* The whole apparatus stands upon a sheet-iron base with legs. The water in the reservoir needs renewal only occasionally. —*Arch. d. Pharm.*, July, 1878.

RECENT PAPERS.

Pharmaceutical Journal and Transactions.

The Paris Exhibition.—

GALENICAL AND ALLIED PREPARATIONS.

Few pharmacists would pass through the French court without being attracted by the fine appearance of some specimens of dry extracts exhibited by the Société Française (M. Adrian & Co.), M. Grandval, of Rheims, M. Mouysset, of Paris, and Messrs. Darrasse & Co., of Paris; they are beautifully bright in color, of a light frothy consistence, and do not appear, as exhibited, to be hygroscopic. It is probable that this result is obtained by some special manipulation while evaporating *in vacuo*, and the previous careful removal of chlorophyll and other bodies prone to decompose and discolor the products under the influence of heat. In the British Pharmacopœia dry extracts are the exception, presumably for the sake of avoiding unnecessarily prolonged application of heat, by which a portion of the extract is rendered insoluble, and it is impossible to say without experience how far the beautiful dry crisp appearance of the specimens referred to may be gained at the expense of the solubility and other essential characters of a good extract, though some solutions of the extracts exhibited by the side of them certainly do look very clear. The difficulty is not overcome by the removal and sacrifice of the first quantity of insoluble matter produced, for, as Mr. Proctor has pointed out, the action is renewed with every fresh application of heat, and he reports that he has subjected extract of aloes to successive treatment until only 3½ per cent of the original extract remained soluble. If these extracts are evaporated to dryness *in vacuo*, in which proceeding there is nothing unusual, then of course the heat can be applied and continued to dryness under conditions least likely to do harm; such products, however, are generally found to be unduly hygroscopic.

The frothy appearance is not an essential character of the above exhibitors' products, for Messrs. Darrasse also exhibit some specimens of aqueous extracts, which, by the artifice of laying them on cut glass dishes standing on white earthenware, are made to appear quite transparent, and nice-looking saccharides of Loxa and Calisaya bark, and of bitter orange, for dilution to form syrups, while M. Grandval shows some fine alcoholic extracts treated with water.

M. Loret, of Sedan, makes a specialty of narcotic extracts prepared from the fresh plant, freed entirely from "inert matters," such as chlorophyll, starch, albumen, and fatty matters, and evaporated in a vacuum, which he claims to be thus rendered more uniform and permanent in their composition. The British Pharmacopœia, differing from the French Codex and the German Pharmacopœia, orders the return of the separated chlorophyll, in making the extracts of aconite, belladonna, conium, and henbane, probably not only because it gives consistency to the extracts, but also because, as separated by simply straining, it contains an admixture of the active principle. To avoid such loss, the process of dialysis has been recently suggested by Mr. Dimock, an American pharmacist, as applicable in removing the inert colloid matters. But this would appear to involve too much dilution and a consequent increase in the amount of water to be eventually evaporated. M. Loret considers that not only does the chlorophyll itself decompose and become darker and insoluble, but it sets up decomposition in the resinoid matter which contains the active principles of the plants, and so diminishes the strength. Deprived completely of these inert matters he finds the extracts are more permanent and contain a uniform quantity of active principle; 1 gram of this extract of stramonium being estimated to contain 0.0068 gram of daturine, and 1 gram of extract of belladonna, 0.0201 gram of atropine, while one gram of extract of digitalis contains 0.090 gram of digitalin. From these extracts M. Loret prepares 10 per cent powders, diluted with sugar of milk, and 1 per cent alcoholates and syrups. While speaking of the dilution of narcotic extracts, it may be remarked that the German Pharmacopœia recommends that for keeping, an equal quantity of dextrin should be gradually mixed with the extract in a warm porcelain capsule, the mass dried at a temperature of 40° to 50° C. until it ceases to lose weight, and sufficient additional dextrin rubbed in to make the weight double that of the extract employed; of this product, in dispensing, twice the weight of the extract prescribed is used.

SACCHARATED EXTRACTS.

Saccharated extracts, for dilution to form syrups, 2 parts representing 1 part of the original extract, are shown by M. Grandval, of Rheims, who also exhibits other concentrated preparations. M. Mouysset also shows a collection of saccharated fluid extracts, which when diluted in the proportion of one part to nine parts of simple syrup are said to represent exactly the syrups of the Codex. M. Bougarel, of Paris, exhibits some extracts of ordinary appearance, and some specimens of "onguent de laurier" and "onguent populeum" of a fine green color.

FLUID EXTRACTS AND TINCTURES.

In the English department, which, although not second in number of exhibits in class 47, undoubtedly is next in importance to France, Messrs. Savory and Moore, of London, exhibit a series of fluid extracts and tinctures, among which, as novelties, may be noticed those of jaborandi, boldo, guarana, coca and coto. They also exhibit preserved juices representing the indigenous materia medica, including succus hyoscyami and succus conii fructus. Some of the other novelties shown by this firm will be noticed further on. Messrs. Southall Bros., and Barclay, of Birmingham, show in one of their two cases, powdered extracts, described as of constant strength, convenient for dispensers as being easily weighed and diffused in pill masses, etc. They have also some special preparations, such as liquor emetinæ, of the same dose as vinum ipecacuanhæ, said not to deposit and to contain an invariable amount of alkaloid, and a sp. amyl. valer. co., recommended as a substitute for valerian preparations generally. These are accompanied by series intended to illustrate the importance of using analyzed drugs.

Amongst the large collections shown in the United States department by Messrs. Tilden, of New York, occupying about one thousand bottles and illustrating all the indigenous crude drugs and their preparations, extracts figure prominently. Here, in the liquid extract, still another variety is met with, containing glycerin, which it will be remembered was introduced as a menstruum in the United States Pharmacopœia for 1873. Although a considerable quantity of these glycerin liquid extracts are now to be met with in this country, there are evident signs that in the United States, their present form is not altogether regarded as satisfactory, and the attention of the revision committee engaged in preparing the new edition of the United States Pharmacopœia is especially directed to the whole subject of extracts, Professor Diehl, chairman of the sub-committee, having drawn up a scheme for the co-operation of pharmacists generally in carrying out an exhaustive series of experiments. Certain it is that a great deal of work in this direction will have to be done before it will be practicable to include the fluid extracts in an international pharmacopœia.

In the Canadian department, Mr. Saunders, of Montreal, supplements a collection of indigenous drugs in bottles, labelled with botanical names and uses, with a number of liquid extracts, and the case of Messrs. Lyman Bros., of Toronto, also consists principally of liquid extracts. Among them are the extracts of phytolacca, gossypium, serpentaria, cimicifuga, pleurisy root (*Asclepias tuberosa*), chimaphila, leptandra, wild cherry bark (*Prunus Virginiana*), etc.

Coming back to the old world, very little illustrative of this section is found in the Austrian, Spanish, Norwegian, or Swedish departments. In the Netherlands department, Messrs. Mouton & Son, of the Hague, exhibit various

pharmaceutical extracts, amongst others a dialyzed extract of ergot, and various preparations of Java cinchona barks.

As closely allied to the class of extracts may be mentioned guarana, specimens of which are to be seen in several of the French and British cases. Messrs. Rigaud & Dusart also exhibit "cannabine," a preparation from Indian hemp, used in the manufacture of antiasthmatic cigars.

RESINS AND POWDERED DRUGS.

Another instance in which the eye is pleased, though the drug is not necessarily improved by the special treatment to which it is submitted, is to be found in the fine case of the Pharmacie Centrale de France, of which M. Dorvault is the director, where are to be seen some handsome specimens of scammony and jalap resins that are almost absolutely colorless. In the next case, too, belonging to Messrs. Adrian & Co., of Paris, there is some scammony resin in the form of a snow-white powder. Messrs. T. & H. Smith, of Edinburgh, also exhibit some very nice specimens of these two resins, both brown and white, as well as podophyllum resin.

Powdered drugs do not figure very largely in the present collection, and credit for the best show may be fairly awarded to an English firm, Messrs. Baiss Bros., of London, who exhibit nice-looking specimens of powdered cinnamon, myrrh, orris, English and Chinese rhubarb, cascarilla, jalap, and the different cinchonas. Messrs. Hélain & Co., of Paris, show a variety of powders for use by pharmacists, grocers, and perfumers, and also some exceedingly thin shavings. Messrs. Mouton, of the Hague, also show some fine powders.

PLASTERS.

Of plasters there are several good exhibits, although most of them partake of the nature of specialties of the houses showing them. In the French department may be mentioned those of Messrs. Fourgera & Lancelot (not in catalogue), M. Beslier, of Paris, M. Grorichard and M. Jacques, of Besançon, M. Dupont, of Orleans, and M. Cruveiller, of Rouffignac, all of whom exhibit revulsive plasters prepared from the resin of a species of *Thapsia*.

Of the better-known vesicants, M. Rigollot shows his "mustard leaves," and mustard papers are also exhibited by M. Esménard and M. Boggio, of Paris. A rubefacient plaster, bearing the indicative name "l'euphorbium," is shown by Messrs. Desnoix & Co., of Paris.

In the case of Messrs. Froumouze Frères, of Paris, the "vesicatoire d'Albespeyre" is accompanied by a fine specimen of cantharidin and some insects said to have been preserved ten years in carbon bisulphide, probably the vapor. In the case, too, of M. Béguin, besides his "vesicatoire," which has for its basis cantharidin associated with caoutchouc, are to be seen chitin, cantharidin (crystallized, sublimed, and precipitated), and the compounds of cantharidin with potash, oxide of copper, ammonia, magnesia, and morphia, together with a series of specimens of vesicating insects used in different parts of the world. Among these may be noted the officinal cantharides, as well as *Lytta adspersa* (Brazil), *Mylabris Cichorii* (South of Europe, Egypt, India, and China), *M. pustulata* (China), *M. axillaris* (Syria), *M. Thunbergii*, *M. Schœnherri*, and *M. Sidæ* (Cape of Good Hope and China), and *Meloe majalis* (South of Europe); there are also specimens of the eggs of various species and the yellow and green fats from cantharides, the yellow from species of *Mylabris*, and the black from species of *Meloe*.

Turning to the British court, Mr. A. W. Gerrard, of London, exhibits a special adhesive plaster, spread on a strong flexible material, and hence claimed to possess the properties, prized by surgeons, of adhesiveness, strength, and flexibility.

GELATIN PREPARATIONS.

Side by side with these plasters, in the lower part of the case, belonging to Messrs. Morson, Mr. Gerrard also has a good display of suppositories, pessaries, and bougies, uniformly arranged in small boxes. In the French department, the medicated bougies and suppositories of Messrs. Reynal & Co., of Paris, form the principal, if not the only, exhibit of this class of goods. In the Austrian department, the same remark may be made of the exhibit of Herr F. Anton Grohs of Vienna, who appears to have devoted much attention to the subject of these topical applications. The substance that he uniformly adopts as a basis for his preparations is gelatin, which he considers far better adapted than cacao butter for the purpose, and, as makers are apt to do, he holds a strong opinion as to the superiority of his goods. Herr Grohs has also introduced nasal bougies, made of gelatin, impregnated with various medicaments; they are conical, three to five inches long, and are said to have been very useful in facilitating a direct and prolonged application of medicines in the treatment of nasal disease. Analogous preparations are his "amygdalæ" and "globuli aurium," for the treatment of aural affections. These are prepared of different sizes, and as their names imply, are either almond-shaped or globular. They are "medicated" with varying proportions of sulphate of zinc, tannin, borax, corrosive sublimate, sulphate of copper, nitrate of silver, extract of opium, morphia, etc.

Gelatin appears to find wide and increasing applications in pharmacy. Deferring at present any remarks upon its sources and manufacture, some other of the preparations in which it plays an important part may be referred to here. Besides the previously-mentioned preparations, Herr Grohs also exhibits "amygdalæ" containing definite doses of such unpleasant tasting substances as fresh kousso flowers and sulphate of quinine for internal use, and "folia gelatini," consisting of gelatin containing sulphate of zinc, sulphate of copper, etc., cast in thin sheets, for external application to wounds; one advantage claimed for the latter is that their non-adhesiveness renders the changing of the dressings a comparatively painless operation.

Gelatin capsules have long been known as a French specialty, and naturally they are not wanting in the French court. Messrs. Barberon, of Chatillon-sur-Loire, exhibit their tar capsules, which are spherical, about the size of a pill, and contain pure Norwegian tar. M. Fleurant, of Rheims, shows his "capsule hydrofuge," which he claims to be suitable for holding instable saline compounds, aqueous and alcoholic solutions, and other compounds for which capsules have not hitherto been available. Among the medicinal substances that he thus incloses are the gelatinous protocarbonate of iron, laudanum, black drop, the officinal (Codex) solution of proto-iodide of iron, rendered unalterable by suspending reduced iron in it, dialyzed iron, etc. In the exhibit of Messrs. Rigaud & Co. (formerly Grimault), of Paris, the capsules and perles are noticeable for their transparency, which speaks well at least for the purity and thinness of the envelope. The latter is a character not without importance in this class of preparations, as it is evident that the thinness of the covering, provided that it is strong and soluble, has the advantage of decreasing the bulk of the capsule and allows it to be more quickly dissolved. There are also in this department exhibits of capsules by M. Foucher and M. Quentin and others.

But the most varied exhibit of gelatin preparations is to be found in the British court in the centre of the case of Messrs. Savory and Moore, of London. This comprises a complete series of the ophthalmic and hypodermic discs of this firm, and among them may be seen not only old-established remedies, as morphia and atropine, but also such recent introductions as colchicia, pilocarpine, curare, and duboisia. Then there is is a series of "lamels" consisting of small sheets of gelatine divided by raised lines into squares, each containing a dose of the medicine with which the material is impregnated, which may be cut off and either taken dissolved or as a lozenge. A considerable number of medicines are thus illustrated, and the series would probably be extended by the firm to any substance compatible with gelatin and non-volatile. The list is completed with sheets of blistering gelatin ("lamellæ cantharidis"), and soluble gelatinous suppositories. Selections of

these gelatin preparations are exhibited packed together in small cases, and form a very portable medicine chest.

Although not quite in place, it may be mentioned here, as medicine chests have been alluded to, that they form a not unimportant or interesting portion of Messrs. Savory and Moore's exhibit. There is, for instance, a "Field Companion," similar to those supplied to the British army. It is light, and could be easily carried by a soldier on the march, and yet contains a good selection of lint, bandages, plasters, splints, tourniquets, and the medicines most important for emergencies in field operations. Then, in connection with this "Companion," there is a "Chemical Cabinet, designed by the late Professor Parkes, of Netly Hospital, and supplied by this firm to the government for use in expeditionary services, such as those in Ashantee and Abyssinia. But the most interesting of all is a dingy looking case, bearing the marks of travel and rough usage. This is the medicine chest of Mr. H. M. Stanley, the celebrated explorer, which, after a few years' knocking about in the wilds of tropical Africa, still stout and strong, finds here a peaceful rest.

In the English court, too, are to be found the medicated glycecolls of Messrs. Kirby, of London. These are transparent, like gelatin lozenges, and, judging from their name, are made from a mixture of gelatin and glycerin. Each glycecoll is said to contain a definite quantity of some medical ingredient, such as those of tannin (1 grain), or those of ipecacuanha and morphia, $\frac{1}{2}$ grain of the former and $\frac{1}{16}$ grain of the latter.

As having some affinity with these preparations, mention may be made here of the beautilul fresh-looking slabs of jujubes prepared by Hawker's process and exhibited by Messrs. Allen and Hanbury, of London.

COATED PILLS.

Many of the preparations already referred to owe much of their perfection of manufacture to advantages involved in the large scale upon which they are produced by their respective exhibitors. But none of them perhaps owe more to this condition than the non-metallic coated pills that have gained so much popularity during the last few years. Coated pills of good appearance are of course prepared on the small scale, but the operation does not always accord conveniently with the arrangements of the dispensing counter, and it requires considerable dexterity of manipulation to obtain a creditable result. Were it possible, or desirable, however, that the ordinary pharmacist should abdicate this portion of his duties, he would find it most difficult to decide between rival competitors ready to perform it for him. Nor would an inspection of the cases of the different coated pill manufacturers in the present exhibition help him much. So far as outward appearance of the pills goes, there seems to be nothing to desire, and each maker might claim to be *primus inter pares*. Any further judgment must be based upon the maker's statement or actual experience, and the best proof that the one has generally confirmed the other is to be found in the present enormous consumption of physic in this form.

By a few makers coated pills are exhibited in enormous variety of officinal and non-officinal formulæ. From the United States, where these preparations have been long in use, Messrs. Warner & Co., of "New York "[Philadelphia?—ED. N. R.], show a case full of handsome looking "sugar coated" pills. Messrs. Schieffelin & Co., of New York, also show a large variety of pills enveloped in a "soluble coating" of good appearance, though some of them, such as the five-grain cinchonidine and five-grain salicin pills, seem rather large. Then there are the "compressed pills" of Messrs. Wyeth, which are said to be formed by simply pressing the powdered drug, without any admixture, into a kind of flattened pill.

But in the British department the show is quite equal. Messrs. Richardson & Co., of Leicester, who claim to be the largest makers of tasteless pills in the world, exhibit upwards of six hundred varieties of their "pearl coated" pills, there being no less than thirty varieties of phosphorus pills. These "pearl coated" pills are said to be perfectly soluble in cold water, and to keep unaltered and uncracked in any climate. Another case, containing coated pills, is that of Messrs. Kirby & Co., of Hatton Garden. Both of these firms also exhibit a variety of portable medicine cases.

In the French department, the non-metallic coated pills do not, pérhaps, take quite so prominent a position, though the granules and pearles could not be easily surpassed. But the brilliant burnished appearance of the silver-coated pills is very noticeable. Printed pills are exhibited by M. Torchon, of Paris. Here, too, is to be seen M. Limousin's ingenious invention for the administration of nauseous powders, which has now obtained wide acceptance, the "cachets médicamenteux," together with the press and wafers used in their formation.

MISCELLANEOUS PREPARATIONS.

Infusions and decoctions are almost necessarily absent; and of officinal syrups, tinctures, and wines very few are seen. In the French court M. Baron-Barthélemy, of Béziers, exhibits some cinchona wines, and others made with the white muscat wine of Frontignan, are shown by M. Barral, of Paris. Of the scale preparations, there is an exhibit of those of the British Pharmacopœia in the fine case of Messrs. Burgoyne, Burbidges & Co., and another is in that of Messrs. Bush & Co., of London; but not many others are noticeable. The same firm shows a number of good-looking granular preparations, as do also Messrs. Savory & Moore, including those of salicin and salicylic acid. In the French court a good collection of granulated effervescing salts is exhibited by M. Le Perdriel, of Paris, including the salts of lithia, the citrate, carbonate and pyrophosphate of iron, and seidlitz and vichy salts; whilst close by M. Torchon, of Paris, exhibits a granular preparation of rhubarb and magnesia.

Pepsine is a substance which might itself be included in this division, but it is so closely allied with a large number of proprietary preparations that it will be more conveniently dealt with under that head.

COD-LIVER OILS.

The medicinal varieties of cod-liver oil are extremely well represented in the present exhibition; in fact, they form by far the most important part of the class of chemical and pharmaceutical products sent from Norway, constituting no less than eighteen out of the twenty-eight exhibits from that country. As it would be presumptuous to allot the palm for excellence upon a mere inspection of the numerous specimens, it will be sufficient to say that a pale good-looking oil is shown by Mr. Jordan, of Tronheim, and a similar remark applies the oils shown by Mr. Bovthen, of Trondhjem, and by the well-known house of Möller, of Christiania, the latter being accompanied by a model of the apparatus used in its preparation. There is also an extremely pale and limpid oil shown by Messrs. Meyer & Co., of Christiania.* Of course, in singling out these light oils, there is no intention of suggesting that the medicinal efficacy is in inverse proportion to the depth of color.

In the French department, Mr. Hogg, of Paris, exhibits a "natural" golden yellow oil in triangular bottles, and a covered spoon for administering it. Shark and ray liver oils are also to be seen in this department.

In the Austrian court, a very limpid cod-liver oil, "purified from stearine," is shown by Herr Fumagalli, of Monfalcone.

In the English court, the way in which the "A" cod-liver oil, manufactured by Messrs. Southall Bros. & Barclay, in Norway, is shown, demonstrates how much more instructive and interesting such exhibitions might be made by the expenditure of a little more trouble on the part of the exhibitors. Besides tall jars of the oil of their own make, this firm, in order to illustrate the chemistry of the oil, exhibits analyzed samples of the various kinds to be met with in the market, together with a series of the organic constituents of the oil, comprising the solid fatty

* See a notice of this oil on page 317 of this number of NEW REMEDIES.

matters (consisting of cetylic and stearic glycerides), stearic acid, cetylic acid, oleic acid, volatile fatty acids, glycerin, "biliary matter," and gaduine. The case also contains water color paintings of species of fish, allied to *Gadus Morrhua*, sometimes used in the manufacture of "cod-liver oil."

From the islands of St. Pierre and Miquelon, lying off the entrance to Fortune Bay, Newfoundland, are sent some specimens of cod-liver oil which are very white, as well as some of a pale-yellow and brown colors. In those islands, the oil prepared in the month of May from lean livers is reckoned the best; but it then requires sixteen parts by measure of liver to obtain one of oil, whilst in July the same quantity will yield six parts, and in September eight. The pale-yellow oils are here prepared by the heat of a water-bath from the residuary livers from the first product; and the brown, used for oiling machinery, etc., are obtained after the livers have undergone a kind of putrid fermentation.

Before closing this section, mention may be made of the beautiful specimens of almond oil expressed from blanched almonds, both sweet and bitter, exhibited by M. Cauchois, of Paris. Some of them appear to be absolutely colorless, and the manufacture is a specialty for use in the preparation of cold cream, etc. In the same case are samples of very white almond paste and powder, and some of varying shades of color.

Liebig's Annalen der Chemie. 193, 1–2.

Mercurialine (*Methylamine*). (ERNST SCHMIDT.) The alkaloid of *Mercurialis annua*, which had been found to have some properties identical with methylamine, but which seemed to be still different from the latter according to previous investigators, has been re-examined by the author, and has been demonstrated to be absolutely identical with *methylamine*. This latter may be regarded as the first member of a series of substituted ammonias, of which the alkaloids must be regarded as complex members. A large number of other plants was likewise examined for methylamine, but it could not be detected elsewhere, except in *Mercurialis annua*.

Archiv der Pharmacie. August.

On Muriatic Acid contaminated with Phosphoric Acid. (DR. EUG. HOLDERMANN.) Having received a lot of "pure hydrochloric acid" from a chemical manufacturer, it was subjected to the ordinary tests for identity and purity, and appeared to be altogether satisfactory. Being afterwards used for preparing liquor ferri chloridi, it was noticed that it produced but a scant effervescence of hydrogen, and that a white substance formed in the mixture, which was at first ascribed to some impurity in the iron, but was subsequently traced to the acid. The latter was then subjected to a systematic analysis and was found to contain 10.75 per cent of officinal hydrochloric, and 89.25 per cent of officinal (Germ. Ph.) phosphoric acid. This curious mixture was, of course, produced by some blunder at the factory, and not by design.

The Bible and Pharmacy. (H. HENDENS.) The author publishes an alphabetical list of all words referring to pharmaceutical or therapeutical terms occurring in the Bible, which appears to suffer only from the fault that the author made use of the German translation, instead of the original texts and the various commentaries: otherwise, his list would have undergone some modifications.

Pharmaceutische Centralhalle. Nos. 32–37.

Recognition of foreign Coloring Agents in Red Wine. (NESSLER.) This may be accomplished by a solution of 7 parts of alum and 10 parts of sodium acetate in 100 parts of water. The color of natural wine is not affected by this, but if the wine is colored with mallow-flowers, it causes it to turn blue; if with bilberries, bluish-violet, and if with cherries,—blue or violet. Some natural red wines at first behave as if they had been colored with mallow-flowers, but after about 15 minutes they reassume their original color; if, however, the color was really due to mallows, it becomes more intensely blue on standing. This reagent enables us to distinguish only absolutely pure red wine from such in which the color is altogether artificial. It is not so reliable where coloring matter has been added to natural red wine.

To make Dresses Incombustible. A serious accident in a factory led one of the owners to experiment as to the cheapest and best substances for making dresses incombustible. He found that a 5-per-cent solution of ammonium phosphate accomplished this purpose.

Cellulose Washers. For the purpose of packing joints are which to be hermetically sealed, as retort-connections, couplings, etc., where vulcanized rubber has usually been used, cellulose appears to be even a better material. It is very cheap, readily absorbs water at first, thereby becoming pliable, and adapts itself more accurately to the surfaces it is intended to make tight. If a joint is exposed to steam, and is to be frequently opened, the cellulose should be soaked in oil.

Poisoning by Salicylic Acid. A case is reported from Wreschen, in Prussia, where a patient suffering from acute rheumatism was poisoned by impure and partially decomposed salicylic acid. After the first dose of about 12 grains he began to perspire very freely; the perspiration increased with two more succeeding doses, and after the fourth dose violent headache and vomiting supervened, followed by coma and death.

Poisoning by Oxalic Acid. Another case of poisoning, by mistaking oxalic acid for Epsom salts, is on record.

Glucose and Fehling's Solution. Dr. H. Soxhlet has made the remarkable observation that the proportion in which glucose and cupric oxide were hitherto supposed to react upon each other (namely, 1 equivalent of the former to 10 of the latter), was not correct. According to him, 1 part by weight of glucose may reduce varying quantities of glucose—between 8.5 and 12.5 equivalents—according to the degree of concentration of the copper-solution. It is, therefore, necessary to pay particular attention to the amounts of liquids titrated with Fehling's solution. If the original test-solution was verified by standard glucose solution, at each succeeding analysis the same volumes of liquid should be used; in this case the error will diminish to a plus or minus of about 0.2 per cent.

Dingler's Polytechnisches Journal. Vol. 229, 4.

The Impurities in Commercial Ammonia. (ED. DONATH.) The preparation of ammonia from the ammoniacal liquor of gas-works is the cause of various impurities found in crude and even refined ammonia preparations. Wittstein having some years ago pointed out that traces of the aniline-bases are occasionally present, the author examined an ammonia which appeared to him to be rather impure. He happened to have a solution of bismuth chloride, containing a large excess of hydrochloric acid, which he therefore partially neutralized with this sample of ammonia. The solution, standing exposed to the air a few days, gradually became colored dark rose-red from above downwards, and the chloride of bismuth, which was afterwards precipitated and washed by water, also exhibited a roseate tint. A sample of the ammonia, supersaturated with hydrochloric acid, showed at once a slight brownish-red color; with excess of dilute sulphuric acid, a rose-red tint; and with hydrochloric acid, after standing a while, the same color, increasing in intensity on the surface. The solution of the sulphate gave off the peculiar penetrating odor of commercial naphthaline, and had reducing properties. 50 cc. of the ammonia, supersaturated with dilute sulphuric acid, discolored 3.8 cc. of a solution of potassium permanganate, of which 1 cc. corresponded to 0.00449 of iron. The author could find no traces of any aniline or toluidine present; but he thinks that there were some bodies present belonging to the leucoline group.

The International Medico-Chirurgical Gazette is the title of a new weekly journal to make its appearance in London, England, on the 1st of November, in relation with the *Allgemeine Wiener Medizinische Zeitung*, all communications appearing simultaneously in the two.

BIBLIOGRAPHY.

MEDICINAL PLANTS: Being Descriptions with Original Figures of the Principal Plants Employed in Medicine, and an account of their Properties and Uses. By ROBERT BENTLEY, F.L.S., and HENRY TRIMEN, M.B., F.L.S. Philadelphia: Lindsay & Blakiston. Price, $2.00.

PART 26 contains the following plates with their description: *Gynocardia odorata*, or Chaulmoogra, already described in NEW REM.; the seeds being used as an alterative tonic in India, and the oil in doses of five or six drops for the same purpose, or as a local stimulant; *Galipea Cusparia*, or Carony Bark (of Guiana), an aromatic tonic and febrifuge; *Arctostaphylos Uva-ursi*, or Bear-Berry; *Solenostemma Argol*, resembling senna somewhat in appearance, and having similar purgative properties; used also as an adulterant of the latter; *Capsicum annum*, or Pod Pepper; *Veronica Virginica*, or Culver's Root, from which eclectic practitioners derive Leptandra, one of their most valued remedies; *Nectandra Rodiæi*, Brown Greenheart of Bibiru (not previously figured).

Part 27 has the following contents: *Aconitum Ferox*, and *Aconitum heterophyllum*, two plants not uncommonly used, but uncommonly depicted; *Melia Azadirachta*, the source of Nim Bark (see p. 149 of this volume of NEW REM.); *Liquidambar orientalis*, the source of styrax (or storax); *Cicuta Virosa*, or Water Hemlock; *Œnanthe crocata*, or Water Dropwort; and *Piper Cubeba*.

Part 28 gives: *Papaver Somniferum*, the opium poppy; *Glycyrrhiza glabra* (Licorice); *Daucus Carota*; *Matricaria Chamomilla*, the wild chamomile; *Capsicum fastigiatum*, Chillies or Bird Pepper; *Origanum vulgare*, vulgo. Majoram; *Andropogon Nardus*, the Citronella or Lemon grass (not previously figured).

Many of the above will be found of unusual interest, owing to their being the first representations we have had access to of newly-introduced drugs.

I.—UEBER EINIGE ABYSSINISCHE HEILMITTEL, II.—EINIGE NOTIZEN ZUR GERICHTLICHEN CHEMIE: Untersuchungen aus dem Pharmaceutischen Institute der Universität Dorpat. Mitgetheilt v. DRAGENDORFF. Reprint from the *Archiv der Pharmacie*. 8vo, pp. 64. Privately published.

THE first of these papers contains extended notes of the examination of the drugs known as Add-Add, Tschuking or Zerechtit (Tigré: *Tschenani Citrado*), or Obeyea, and Kosâla (Tigré: *Sangala*), or Kusso. The second relates to the chemical examination of salicylic acid, Gelsemium sempervirens, Jaborandi, Taxus Baccata, the alkaloid of Maize and Brucia, the examination of essential oils, the effects of carbolic acid on the urine, and observations relating to the quantitative analysis of Cina flowers (wormseed).

ANNUAL REPORT OF THE MARINE HOSPITAL SERVICE of the United States for the fiscal year 1876–77. Washington: Government Printing Office, 1878. 8vo, pp. 212.

BESIDES the customary report by the Supervising Surgeon-General, John M. Woodworth, M.D., the volume contains the paper by Oscar Oldberg, Phar.D., Upon the Adoption of the Metric System of Weights and Measures for Medical and Pharmaceutical Purposes, which, in an abbreviated form, we have already noticed. Surgeon P. H. Bailhache, of the corps, contributes a paper on the Physical Examination of Seamen. Surgeon Walter Wyman writes on River Exposure and its Effects on the Lungs. Assistant-Surgeon George H. Stone is the author of a paper on Yellow Fever at Savannah, Ga., in 1876, and Assistant-Surgeon Henry Smith upon the same epidemic, and likewise its manifestation in Brunswick, Ga. Surgeon Robert D. Murray describes the same disease as it appeared in Fernandina, Fla., in the following year.

The practical nature of the contents of the work renders it by no means the least in value of a series of reports which have contributed to the credit won by this service under Dr. Woodworth's management.

A CLINICAL HISTORY OF THE MEDICAL AND SURGICAL DISEASES OF WOMEN. By ROBERT BARNES, M.D., London. Second American from the Second and Revised London Edition, with 181 illustrations. Philadelphia: Henry C. Lea, 1878. 8vo, pp. 784.

THE considerable revision which this work has undergone has included the addition of a new chapter on the Relations of Bladder and Bowel Disorders to Uterine Affections, and the employment of heavy figures in the index, as references to the leading articles on each subject. Some difficulty which was experienced with the first edition, in finding special subjects, has also been quite corrected by diminishing the number of chapters, and by a more liberal use of centre headings in small capitals.

The clinical arrangement of the work has proved a very popular one, and the experience of the author enables him to give to it a personality which has been one of its strongest recommendations. The revision has not consisted in mere additions to or excisions from electrotyped plates, but in a condensation of the matter in some portions to allow of its amplification at others. Any editorial commendation of Dr. Barnes' writings would be superfluous, and there is no question that, with the changes made from the first edition, this one will become even more popular than it was.

Dr. Barnes has paid the compliment to his American friends of dedicating this edition to Professor Fordyce Barker.

THE DRUGGISTS' GENERAL RECEIPT BOOK. Comprising a Copious Veterinary Formulary, Numerous Recipes in Patent and Proprietary Medicines, Druggists' Nostrums, etc., Perfumery and Cosmetics, Beverages, Dietetic Articles and Condiments, Trade Chemicals, Scientific Processes, and an Appendix of Useful Tables. By HENRY BEASLEY. Eighth Edition. Philadelphia: Lindsay & Blakiston, 1878. Small 8vo, pp. 510.

THE extended title will describe the nature of its contents to those who are not already familiar with this work. The formulas for medicines for horses fill 112 pages; 24 pages are devoted to remedies for cattle; 10 pages to formulas for sheep and lambs; 2 pages to medicines for swine; 13 to those suited for canine ailments, and the balance of this section (3 pages) to remedies for the diseases of poultry and rabbits. This will illustrate the general completeness of the work, and a personal acquaintance with its pages will show that it is full of information adapted to the daily wants of either the retail druggist or the editor of a journal who makes up his column of "Queries and Answers" from miscellaneous formulas, and adds hypothetical initials to give them character.

Neither of the above persons will regret the investment made in its purchase.

A TREATISE ON THE SCIENCE AND PRACTICE OF MIDWIFERY. By W. S. PLAYFAIR, M.D., F.R.C.P., etc. With Notes and Additions by Robert P. Harris, M.D. Second American from the Second and Revised London Edition, with two plates and 182 illustrations. Philadelphia: Henry C. Lea, 1878. 8vo, pp. 639.

WHEN the first edition of this work appeared, it was questioned whether it would find room in a field already so well occupied by a number of treatises of almost of equal merit. The advent, after so brief an interval, of second editions, both in England and in this country, appears to fully justify the prediction of the reviewers of the first one, that its popularity would not cease with its novelty. The present edition has, like its predecessor, an additional chapter on the use of the obstetric forceps, calculated to adapt it better to the uses of practitioners in this country, where the position on the back is the rule, as much as that on the left side is customary in England. It would have been quite as well to have omitted the English method in the present instance.

The work is dedicated to Professor T. Gaillard Thomas, and the American editor has incorporated with it the views of the former on gastro-hysterotomy and intra-venous injection of milk; measures which, it is quite likely, derive more popularity from the fame of their advocate than from their intrinsic merits. A description of them in this connection, however, is likely to bring them into more general notice, and subject them to the test of use.

The strong feature of Professor Playfair's work is that it is adapted to the needs of the obstetric practitioner, and that it does not attempt to follow out in their details all the questions of interest which are connected with the subject. It is the judgment shown in devoting space to each topic according to its relative importance, which has kept the work within its present limits, and made it so satisfactory as a general guide.

WOOD'S LIBRARY OF STANDARD MEDICAL AUTHORS. In monthly volumes, varying from 200 to 300 pages, 8vo. $12.00 per annum.

THIS new undertaking of William Wood & Co. will without doubt prove extremely popular, since the character of the works to be republished in this form is well-established and above reproach. The ones selected for the first eight months are alone worth, at retail, much more than the cost of an annual subscription to the series, and all are known to be desirable as well as standard treatises. The list, so far as it is announced, includes the following.

I.—ON REST AND PAIN. By JOHN HILTON, F.R.S., F.R.C.S. Relating to the Influence of Mechanical and Physiological Rest in the Treatment of Accidents and Surgical Diseases, and the Diagnostic Value of Pain, pp. 300 (about).

II.—DISEASES OF THE INTESTINES AND PERITONÆUM. Comprising articles by such authors as JOHN RICHARD WARDELL, JOHN SYER BRISTOWE, J. WARBURTON BEGBIE, THOMAS BLIZZARD CURLING, and W. H. RANSOM, pp. 250.

III.—A PRACTICAL MANUAL OF DISEASES OF CHILDREN, WITH A FORMULARY. By EDWARD ELLIS, M.D., pp. 270.

IV.—DISEASES OF WOMEN. By LAWSON TAIT, F.R.C.S., pp. 200.

V.—A CLINICAL TREATISE ON DISEASES OF THE LIVER. By DR. FRIED. THEO. FRERICHS. Translated by CHARLES MURCHISON, M.D. In 3 volumes of about 300 pages each.

VI.—INFANT FEEDING AND ITS INFLUENCE ON LIFE; or, The Causes and Prevention of Infant Mortality. By C. H. F. ROUTH, M.D., pp. 280.

The specimen-pages are handsome specimens of workmanship, the paper being of the best quality, the type clear, and the binding substantial and elegant.

POCKET THERAPEUTICS AND DOSE BOOK, with Classification and Explanation of Medicines; Index of Diseases, with Appropriate Remedies; Classification of Symptoms; Poisons and their Antidotes; Useful Hints to the Prescriber. By MORSE STEWARD, JR., B.A., M.D. Detroit, Mich., 1878. Pp. 101, 2½x4 inches. 50c.

THIS is by all odds the smallest space into which we have yet seen the practice of medicine condensed, but what purpose it is to serve we are at a loss to comprehend. The fact is, the subject has been squeezed into it until the barest skeleton remains, and as a source of information it is about as satisfactory as a pocket dictionary—if you except its posological table, which is the only feature of special importance; and it is very good.

LESSONS IN ELEMENTARY CHEMISTRY, ORGANIC AND INORGANIC. By HENRY E. ROSCOE, B.A., F.R.S. A New Edition. New York: William Wood & Co., 1879. Sm. 8vo, pp. 416.

As an elementary work, intended for public schools, this will find its chief usefulness, but it might also be made to serve very well the purposes of beginners in medicine, as the general and pretty complete view which it gives of the subject will afford an insight which will aid in the comprehension of more elaborate works. For a non-professional student it is very well adapted and can be recommended.

VALUATION OF U. S. P. HYDRATES AND CARBONATES OF THE ALKALIES.

BY HENRY B. PARSONS.

THE hydrates and carbonates of potassium, sodium, and ammonium are the most important of all pharmacopœial salts; not only are they valuable for their own chemical and medicinal properties, but they are used in the preparation of a very large number of other salts. It is important, then, that every pharmacist should be able quickly to determine the quality of these chemicals, which he must so frequently use. The volumetric estimation of alkaline hydrates and carbonates by means of a dilute acid of known strength is known as *alkalimetry*, and is very simple, and easy of execution. It is based upon the fact that a definite weight of any one of these salts requires for neutralization a definite weight of an acid, and that these definite weights of alkali and acid are equal to their combining numbers ("molecular weights"). By means of equations we may more readily understand this matter, thus:

$$\left\{\begin{matrix} KOH+HCl \\ 56.1+36.5 \end{matrix}\right\} = \left\{\begin{matrix} KCl+H_2O. \\ 74.6+18 \end{matrix}\right\}$$

The above equation shows that 56.1 parts by weight of KOH* require 36.5 parts of absolute HCl† to form a neutral solution containing 74.6 parts of KCl§ and 18 parts of H_2O.‡ In the same way we determine that 112.2 parts by weight of KOH require 126 parts of crystallized oxalic acid: ($H_2C_2O_4.2H_2O$);

$$\begin{matrix} 2KOH+H_2C_2O_4.2H_2O=K_2C_2O_4+4H_2O \\ 112.2+126 \qquad\qquad =166.2+72 \end{matrix}$$

In this equation *two* molecules of KOH are required to neutralize one molecule of oxalic acid; hence it will be seen that one molecule of KOH (56.1 parts by weight) requires for neutralization one-half the molecule of oxalic acid ($\frac{126}{2}=63$ parts by weight). Now, if we dissolve 63 grammes of oxalic acid in any quantity of water, the whole bulk of acid liquid is still able to neutralize just 56.1 grammes of pure dry KOH. If the acid solution is of a known measure, we can say just how much KOH any given volume of the acid will neutralize. Suppose 63 grammes of pure, crystallized oxalic acid to be dissolved in one litre of cold water, then

1000 cc.	acid	will	neutralize	56.1 grammes	KOH
100 cc.	"	"	"	5.61 "	"
10 cc.	"	"	"	.561 "	"
1 cc.	"	"	"	.0561 "	"

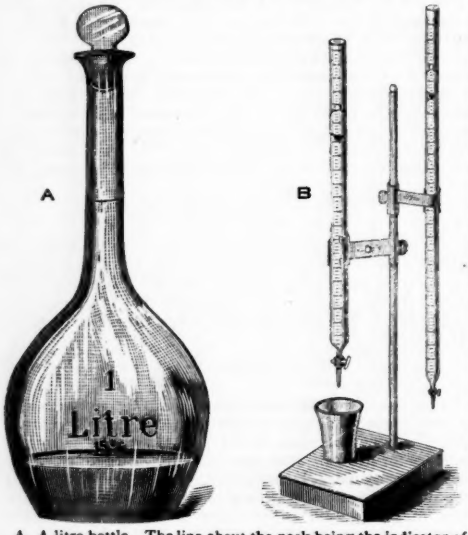
If the KOH is impure, it will require *less* than the 1000 cc. to neutralize 56.1 grammes, and *less* than 100 cc. to neutralize 5.61 grammes, etc., and from the amount of acid required for neutralization the percentage of pure KOH can readily be deduced. Let us weigh out as quickly and accurately as possible 5.61 grammes of commercial KOH, and dissolve it in a moderate amount of water. Now, if this is perfectly pure, it will require exactly 100 cc. of the standard acid to neutralize it; upon trial we find that only 97.6 cc. of the acid are required. Hence the salt is $\frac{97.6}{100.0}$ pure KOH, *i. e.*, it contains 97.6 per cent of pure KOH. It will be seen that the percentage of purity of any hydrate or carbonate of the alkalies will be represented by the number of cc. of acid used, provided the amount of alkali theoretically equivalent to 100 cc. of the acid is accurately weighed out and titrated.

The apparatus necessary is: a measuring jar, accurately graduated and holding a litre of liquid; a burette, glass stoppered, capacity 50 cubic centimetres, graduated to fifths or tenths of a cubic centimetre; and several beakers holding about 150 cc. each, with an equal number of glass stirring rods. The whole outfit need not cost over five or six dollars, and it will be found very useful in other determinations.

The oxalic acid should be chemically pure, in clean,

* Potassic hydrate. † Hydrochloric acid.
§ Potassium chlorate. ‡ Water.

dry, well-formed crystals; it should leave no residue when ignited on platinum foil (absence of bases), nor should it give the least test for nitric acid (an impurity sometimes present when the acid has been made by action of nitric acid upon starch). As an "indicator," to show when the alkali has been neutralized by the oxalic acid, a tincture of cochineal is best. Fresenius directs to macerate three grammes of cochineal, for three days, with 50 cc. strong alcohol and 200 cc. water. Filter, and keep well corked. The color of cochineal is not changed by free carbonic anhydride (CO_2), while the color of litmus is considerably



A. A litre bottle. The line about the neck being the indicator of the exact quantity.
B. Two glass-stoppered burettes with stand and beaker glass.

modified; hence cochineal is preferable. In practice it is better to use a "decinormal" solution of oxalic acid, containing 6.3 grammes to the litre. By so doing we avoid weighing out such large quantities of alkaline salts, while the results obtained are just as accurate. Of this solution,

1000 cc. will neutralize 5.61 grammes pure KOH
100 cc. " " .561 " " "

In other words, 100 cc. of this solution will neutralize one one-hundredth of the molecular weight, in grammes, of any alkaline hydrate or bicarbonate, or one-two-hundredths ($\frac{1}{100}$ of $\frac{1}{2}$) of the molecular weight of any alkaline normal carbonate or oxide. The reason for weighing out $\frac{1}{100}$ of the molecular weight for normal carbonates is because the oxalic acid in one litre is only sufficient to saturate one atom of K in any hydrate or carbonate; the normal carbonates and the oxides of the alkalies contain *two* atoms of K, Na, etc., and, consequently, require twice the volume of acid solution for neutralization. Hence it is proper to weigh out of carbonates or oxides $\frac{1}{100}$ of $\frac{1}{2}$ their molecular weights when estimating their purity volumetrically. If the proper quantities are weighed and titrated, each cc. of acid used shows one per cent of the substance sought.

In practice, weigh out the amount of alkaline hydrate theoretically equivalent to 100 cc. of the acid used, add about 20 drops of cochineal tincture, and drop the acid, from a burette, into the water solution of alkali, until the purple color changes to the straw-yellow or amber color due to slight excess of acid. The number of cc. of acid employed shows the percentage of pure salt. Beginners are often troubled to know the "end reaction," because they do not know the exact shade of color showing the change from alkaline to acid reaction. To obviate this difficulty, select two beakers of the same size as those used in titration, place in each 100 cc. pure water and 20 drops of cochineal tincture. To one solution add a single drop of acid, and to the other add a single drop of alkali. By comparing the solutions titrated with these standard colors, it soon becomes easy to catch the neutral point.

To secure greater accuracy, it is best to make several titrations, and take the average as the true result. By dissolving the weighed amount of alkali in a definite measure of water, and taking aliquot parts, very little extra trouble is experienced. For instance, it is required to determine the per cent of pure K_2CO_3 in a commercial sample: Weigh accurately .691 grammes ($\frac{1}{100}$ of $\frac{1}{2}$ of 138.2) and add water to make 100 cc. Then, by means of the burette, measure out into separate beakers four portions of 20 cc. each. Rinse the burette thoroughly with water, then with a little of the standard oxalic acid, and fill with the standard acid. Having added the same amount of cochineal tincture to each solution, carefully run in the acid until the neutral point is obtained; the number of cc. of acid used are, respectively, 19.7, 19.6, 19.6, 19.5; the average being 19.6. This average multiplied by five gives the percentage, 98.

In the case of compounds which are variable mixtures of several salts, it is customary to state the results as all oxide, or hydrate, or carbonate. Potassii carbonas impura, U. S. P. (Pearlash), is a variable mixture of hydrate and carbonate, with more or less sulphate, chloride, and silicate of potassium, with traces of organic matter, silica, iron, calcium, etc. The results do not show how much of the salt sought is actually present in that particular condition, but they do show to how much the mixture is equivalent; that is, how much of the required salt may be made from the mixture. If it is required to know how much potassic hydrate may be made from pearlash, weigh out .561 grammes, and if how much oxide, weigh out .471 grammes, and titrate with decinormal acid. The percentages thus obtained show the value of the pearlash for the purposes named.

It will be noticed that alkalimetry gives no clue as to the nature of the impurities present in alkaline salts; these must be determined by qualitative and quantitative analysis.

Those students who have Attfield's Chemistry will find very full directions for alkalimetry on pages 528–538. A very excellent work on volumetric analysis in general is "Sutton's Volumetric Analysis."

The next paper will be upon Acidimetry.

Blueing for Clothes.—The following formula is given by the *Scientific American* for the preparation of a blueing for clothes: Mix dry Prussian blue with about 50 per cent of hot water and 15 per cent of potassium ferrocyanide (yellow prussiate) in powder; pass the mixture through a fine sieve, dilute it with a little hot water, and pass the dry unsized paper through the solution, and expose it to warm air until dry.

Cuticura and its Effect on the Skin.—In answer to the statement of Dr. Wigglesworth, of Boston (see page 286 of NEW REMEDIES), regarding the harmful effect following the use of this proprietary remedy when applied to the skin, Dr. J. A. McArthur writes to the Boston *Med. and Surg. Journ.* as follows: "In a recent number of the *Journal* appeared an article in which the writer states that it has come to his knowledge that physicians have prescribed 'cuticura' to patients having diseases of the skin, and with very bad results,' etc. Now as this statement is entirely contrary to my own experience, I deem it important to state briefly the result of my individual observations. I have prescribed 'cuticura' in a number of cases—in all ten or twelve—and have never yet seen any of the bad effects referred to by your correspondent; on the contrary, have usually had most satisfactory results from using the same. I direct my druggist to put it up in the form of a prescription, and not as a proprietary article. I have used it on my own person for very obstinate eczema, and with good advantage, never having experienced any of the irritant effects referred to in the above-named article. In fact, with 'cuticura' externally, and two tar capsules thrice daily, a complete cure seems to have resulted."

PRESCRIPTIONS AND FORMULÆ.

Perfumes and Cosmetics.—The approach of the holiday season is likely to stimulate attention to this class of articles; we publish, therefore, a number of formulas furnished us by a correspondent who requests that his name be not mentioned, and who adopts instead the *nom de plume* "Parfumeur."

BOSTON EAU DE COLOGNE.

Otto of bergamot,		
" lemon,		
" lavender,		
" rosemary	ãã 1	drachm.
Rect. spirit	1	**pint.**
Orange flower water	2	ounces.

Mix and filter.

BOUQUET COLOGNE.

Otto of bergamot	2	ounces.
" lemon	2	"
" spearmint	2	drachms.
" cinnamon	3	"
" cloves	3	"
" lavender, garden	6	"
" orange peel	4	"
" rosemary	6	"
" origanum	30	drops.
" rose	30	"
Extract of musk	1	ounce.
Alcohol	10	gallons.
Rose or orange flower water	10	pints.

Mix well. Filter after standing two weeks.

MUSK COLOGNE.

Extract of musk	2	ounces.
Otto of bergamot	2	drachms.
" lemon	4	"
" lavender	2	"
" neroli	½	"
Absolute alcohol	3	pints.
Rose water	8	ounces.

Mix.

UNIQUE POMADE.

Castor oil	2	pounds.
Olive oil	1	"
Lard	2	"
White wax	¼	pound.
Yellow wax	2	ounces.
Otto of bergamot	2	"
" lavender flowers	2	"
" cloves	1	drachm.
" lemon	1	"
" verbena	1	"
" musk	1	"
Cologne water	4	ounces.
Otto of cinnamon, true	20	drops.
Extract of vanilla	½	ounce.

BEAR'S OIL.

Lard oil	5	gallons.
Otto of cassia	5	ounces.
" bergamot	10	"
" lavender	5	"
" lemon	5	"

Mix well.

SERNEVEMITE COLOGNE.

Otto of bitter orange	10	ounces.		
" bergamot	10	"		
" lemon	2½	"		
" neroli bigarade	6	drachms	15	minims.
" rosemary	6	"	15	"
Ext. of musk (4 dr. to 6 pts.)	27½	ounces.		
" orange flower	12½	"		
" vanilla	2½	"		
Spirit, cologne	8	gallons.		
French orange flower water	1	gallon.		

WHITE ROSE SACHET POWDER.

Powd. starch	½	pound.
" orris root	½	"
Otto of rose	2	drachms.
" patchouly	15	minims.

Mix thoroughly by passing through a sieve.

YLANG-YLANG SACHET POWDER.

Powd. orris root	1	pound.
" benzoin	4	ounces.
Civet	5	grains.
Otto of ylang-ylang	20	drops.
" bitter almonds	3	"

Mix.

VIOLET SACHET POWDER.

Powd. orris root	2	pounds.
Gum benzoin	4	ounces.
Otto of bitter almonds	10	drops.
" rose	10	"
Extract of cassie	1	ounce.

Mix.

CORAL TOOTH POWDER.

White sugar	½	pound.
Precipitated chalk	1	"
Prepared chalk	1	"
Powd. orris	½	"
Cream of tartar	3	ounces.
Powd. cuttle-fish bone	2	"
Chlorate of potassium	½	ounce.
Carmine	2	drachms.
Tincture of myrrh	8	"
Extract of vanilla	4	"
Otto of wintergreen	½	drachm.
" sassafrass	½	"
" lemon	10	drops.
" peppermint	10	"
" cloves	10	"
" cinnamon	10	"
" rose	5	"

Mix thoroughly.

NONE SUCH TOOTH POWDER.

Precipitated chalk	1	pound.
Powd. orris	1	"
" myrrh	¼	"
" cuttle-fish bone	¼	"
B. C. soda	2	ounces.
Otto of wintergreen	10	drops.
" rose	5	"
" spearmint	10	"
Color with carmine	q. s.	

For tooth paste grind with honey.

JOHN B. ECKEL'S FLORIDA WATER.

Otto of lemon	6	ounces.
" lavender	8	"
" lemongrass (Winter's)	2	"
" cloves	4	"
Alcohol	4	gallons.
Distilled water	1	gallon.

Mix and filter.

Artificial Mineral Waters.

As there are comparatively few who can afford either the expense or the time to pay a prolonged visit to any of the European watering places, which are celebrated for the remedial qualities of their several waters, it has for a long time been customary to export these waters to distant places, where they may be used with benefit by invalids, although it is pretty well acknowledged that their curative powers only partially reside in the water itself, and that at least an equal share of their usefulness must be attributed to the personal visit of the invalid at the spring.

But since it is not always possible to obtain these natural waters, particularly in this country, recourse may be had, in most cases, to artificial substitutes, composed of

such ingredients and in such quantities, as most closely approach the original. The preparation of these waters is by no means difficult, requiring, besides the necessary chemicals, merely an apparatus for generating carbonic acid gas, which is at the disposal of many pharmacists.

Believing that a series of formulæ for preparing the more important mineral waters will be of service to many members of the profession, we shall give in the following, first, a list of chemicals necessary for their manufacture, and afterwards the formulas and directions for compounding them.*

I.—CHEMICALS.

Many of these are employed in form of a standard 10-per cent solution, which may be kept in stock, so that any mineral water can be prepared, in small quantities, at short notice. All quantities mentioned below are understood to be taken *by weight*, and the water used for making the solutions should be distilled.

1. *Ammonium Carbonate, solution.*
Water of ammonia, sp. gr. 960.....29 parts.
Carbonic acid water (at 4 atm.).....51 "

To be preserved in well-closed vessels.
Contains 10 per cent of ammonium carbonate.

2. *Ammonium Chloride, solution.*
Ammonium chloride, pure.....1 part.
Water.....9 parts.

Dissolve and filter. Spec. gr. 1030.
Contains 10 per cent of ammonium chloride.

3. *Aluminium Chloride, solution.*
Alumina, rendered anhydrous by faintly igniting in a porcelain crucible... 27 parts.
Hydrochloric acid, sp. gr. 1048.....560 "
Water, sufficient to make..... 680 "

Digest the alumina in a flask with the acid for about 2 hours, with occasional shaking; then add the water and filter. Sp. gr. 1072–1073.
Contains 10 per cent of aluminium chloride.

4. *Aluminium and Sodium Sulphate, solution.*
Aluminium and sodium sulphate (or soda alum), dry.....1 part.
Water.....9 parts.

Dissolve. Let stand 1 day, and filter. Sp. gr. 1078–1079.
Contains 10 per cent of soda alum.

5. *Barium Chloride, solution.*
Barium chloride, cryst.....1 part.
Water.....9 parts.

Dissolve and filter. Sp. gr. 1079–1080.
Contains 10 per cent of barium chloride.

6. *Calcicum Carbonate, dry.*
Calcium carbonate, prepared by precipitating a solution of calcium chloride with an alkaline carbonate, and dried on the waterbath.

7. *Calcium Chloride, solution.*
Calcium chloride, hydrated..... 2 parts.
Water.....13 "

Or sufficient to make a solution of sp. gr. 1088–1089 (at 17.5° C.=63.5° F.).

The salt is prepared by adding to 32 parts of hydrochloric acid, sp. gr. 1120, 12 parts of white marble, and when effervescence has ceased, further adding 1 part of chloride of lime, and digesting for 1 day. The whole is then filtered, the filtrate evaporated, dried by gradually raising the temperature to 190–200° C. (=374°–392° F.), and the salt then transferred to well-closed bottles.
Contains 10 per cent of calcium chloride.

8. *Calcium Fluoride, dry.*
Native fluorspar, select white.....q. s.

Powder it in an iron mortor, sift it, and rub it in a porcelain mortar, with water, to an impalpable powder. Wash this first with very dilute nitric acid (1 part of acid to 50 of water), then with pure water, and dry.

9. *Calcium Sulphate, dry.*
Calcium chloride, hydrated (see No. 7). 1 part.
Water.....10 parts.

Dissolve, filter, and add it to a filtered solution of

Sodium sulphate, cryst..... 3 parts.
Water.....30 "

Let the precipitate subside, decant, wash, and dry at a temperature not exceeding 40° C. Keep in well-closed bottles.

10. *Iron Chloride, dry.* (*Ferrous chloride, or Protochloride of iron.*)
Iron wire, cut.....1 part.
Hydrochloric acid, sp. gr. 1120–1123....4 parts.
Water.....3 parts.

Pour the acid on the iron wire contained in a rather large flask, and standing in a warm place, and shake it occasionally, until no more bubbles of gas are given off. Filter and evaporate the filtrate in a porcelain capsule to dryness. The dry residue is to be rubbed to a fine powder, and, under stirring, to be exposed on a plate to the solar rays until it is perfectly dry and white, and a small quantity dissolved in water does not give a blue reaction with potassium ferro-cyanide.

To be kept in well-closed, long, and narrow vials, exposed to solar light.

11. *Iron Pyrophosphate, dry.*
Iron (sesqui-) chloride, cryst..... 54 parts.
(*or* Solution of (sesqui-) chloride, sp. gr. 1482..... 72 ")
Water.....260 "
Alcohol, stronger.....150 "

Dissolve the ferric chloride in the water, and add to it the alcohol. Add the solution, while cold, to a likewise cold solution of

Sodium pyrophosphate, cryst..... 70 parts.
Water.....1400 "

Set aside for one hour; then collect the precipitate on a filter, wash it with a moderate quantity of cold water, press it between bibulous paper, and dry it at a temperature not exceeding 30° C. (=86° F.).

12. *Iron, reduced.*
Iron, reduced by hydrogen.

13. *Iron Sulphate, granular.*
Sulphuric acid, pure concent..... 30 parts.
Water.....150 "
Iron wire or filings..... 20 "

Add the acid to the water; then add the iron, which must be added in considerable excess. When the reaction has ceased, add

Sulphuric acid, pure concent.....1 part,

and then, under stirring

Alcohol, stronger.....an equal bulk.

Let stand one hour; collect the precipitate on a strainer, wash it with alcohol, press and dry it, while exposing it to the air, and gently stirring on filtering paper, as rapidly as possible. To be kept in well-closed bottles.

14. *Lithium Carbonate, dry.*
Ammonium carbonate..... 5 parts.
Water, tepid.....60 "
Water of ammonia, sp. gr. 960..... 6 "

Dissolve the ammonium carbonate in the water, and add the water of ammonia; then add, under stirring,

Lithium chloride, dry.....4 parts,

and heat to boiling. After twenty-four hours, collect the

* Most of the following has been taken from *Hager's Manuale Pharmaceuticum*, which is written in Latin, and therefore not as freely used by pharmacists in this country as it should be. We would most strongly advise all those who can read Latin to procure a copy, as it contains an immense amount of practical information, not to be found elsewhere.

precipitate on a filter, wash it first with a little cold water, then with alcohol, until the washings cease to be or are only slightly clouded by silver nitrate. Finally, dry the precipitate on a waterbath.

15. *Lithium Chloride, solution.*

Lithium chloride, completely dried.... ..1 part.
Water ..... 9 parts.

Contains 10 per cent anhydrous lithium chloride. Sp. gr. 1057-1058.

16. *Lithium Phosphate, dry.*

Lithium carbonate..... 4 parts.
Acetic acid, cont. 25 per cent anhydride, 21 "

Digest for several hours in a large flask; then add a filtered mixture of

Water of ammonia, sp. gr. 960..... 55 parts.
Phosphoric acid, dilute, sp. gr. 1130.... 45 "
(*or* Phosphoric acid, dilute, sp. gr. 1120. 49.6 ")
Water.....200 "

Let stand one day; then collect precipitate on a filter, wash it with as small a quantity of water as possible, press it between filtering paper, and dry it at a temperature between 120–150° C. (248°–302° F.).

17. *Magnesium Carbonate.*

Magnesium sulphate..... 3 parts.
Water.....10 "

Dissolve and filter. Add to the filtrate contained in a flask

Sodium bicarbonate, pure and in very fine powder.....2 parts.

Then expose the mixture in a warm place or on a waterbath to a heat not exceeding 45° C. (=113° F.) for about one-half hour, stir frequently, until the temperature has fallen to 40° C. (=104° F.), and set it aside for three to four days at a temperature of 10–15° C. (50 to 59° F.), stirring occasionally; then collect the precipitate on a filter, wash it with cold water, press it strongly between filtering paper, or in a linen bag, break the cake into very small pieces, expose them between filtering paper for a few days to the air, rub them to powder, and preserve the powder in well-closed vessels.

18. *Magnesium Chloride, solution.*

Hydrochloric acid, sp. gr. 1048.....73 parts.
Magnesium carbonate, officinal.....10 "

To the magnesium carbonate, contained in a flask, gradually add the acid. (The magnesium salt must be present in excess.) Heat nearly to boiling, let cool, filter, and wash the filter with enough water to increase the bulk of the filtrate to.....95 parts.

Contains 10 per cent anhydrous magnesium chloride. Sp. gr. 1085–1086.

19. *Magnesium Sulphate, solution.*

Magnesium sulphate, cryst..... 41 parts.
Water.....159 "
Or q. s. to make..... 200 "

Contains 10 per cent anhydrous magnesium sulphate. Sp. gr. 1105–1106.

20. *Manganese Carbonate, dry.*

Manganese sulphate, pure cryst.... ... 12 parts.
Water, recently boiled..... .....120 "

Dissolve, filter, and cool to about 10° C. (=50° F.); then add gradually a solution of

Potassium bicarbonate..... 12 parts.
Water, recently boiled.....120 "

Stir the mixture, let it stand for one day in a cold place, wash the precipitate with recently boiled, but cold water, decant, collect the precipitate on a filter, wash it well, press it between bibulous paper, and dry it in a cold place over sulphuric acid. Preserve in a well-closed bottle. It should be white.

21. *Potassium Bromide, crystallized.*

22. *Potassium Carbonate, solution.*

Potassium carbonate, pure dry... .....10 parts.
Water..... .....81 "

Or q. s. to make a solution of sp. gr. 1092–1093.

Or: Potassium bicarbonate, cryst.....10 parts.
Water..... 59 "

Spec. grav. 1092–1093.

Contains, in either case, 10 per cent anhydrous potassium carbonate.

23. *Potassium Chloride, dry.*

Potassium carbonate, dry.....10 parts.
Water.....20 "
Hydrochloric acid, sp. gr. 1123, about..20 "

To the water and potassium carbonate, contained in a large flask, add the acid to exact neutralization. Let stand one day and filter. Evaporate the filtrate until a perfectly dry salt remains.

24. *Potassium Chloride, solution.*

Potassium chloride, dry.....1 part.
Water.....9 parts.

Dissolve and filter. Spec. gr. 1064–1065. Contains 10 per cent potassium chloride.

25. *Potassium Iodide, crystallized.*

26. *Potassium Sulphate, dry.*

Potassium sulphate, pure, powdered, and well dried.

27. *Sodium Arseniate, solution.*

Arsenic acid (H_3AsO_4), dried at a moderate heat..... 23 parts.
Sodium carbonate, perfectly dry..... 32 "
Water .....3000 "

Digest in a large flask until the acid is dissolved; then add

Water, sufficient to make.....4160 parts.

Contains 1 per cent anhydrous sodium arseniate.

28. *Sodium Bromide, solution.*

Sodium bromide, dry.....1 part.
Water .....9 parts.

Dissolve and filter. Sp. gr. 1091–1093.
Contains 10 per cent dry sodium bromide.

29. *Sodium Carbonate, solution.*

Sodium carbonate, dry.....1 part.
Water .....9 parts.

Or sufficient to make a solution of sp. gr. 1105.
Contains 10 per cent anhydrous sodium carbonate.

30. *Sodium Chloride, solution.*

Sodium chloride, dry.....1 part.
Water .....9 parts.

Dissolve and filter. Sp. gr. 1073–1074.
Contains 10 per cent dry sodium chloride.

31. *Sodium Fluoride, solution.*

Sodium fluoride, powd.....1 part.
Water, warm .....99 parts.

Let stand a few days, occasionally shaking.
Contains 1 per cent of dry sodium fluoride.

[Sodium fluoride, or any alkaline fluoride, may be prepared in the following manner. Spread a sheet of pure rubber (sheet-rubber) over a porcelain capsule and depress the rubber to conform to the shape of the latter. Pour a rather dilute solution of the alkali into the rubber-covered dish, and gradually add pure hydrofluoric acid while stirring with a glass rod covered with a piece of pure rubber-tubing, until the alkali is perfectly neutralized. Some of the fluoride formed will probably separate of its own accord in form of a jelly; the remainder may be obtained by evaporating to a small bulk, straining, and drying the residue. The last motherwater should be thrown away.—ED. N. R.]

NOVELTIES.

Vellentimels.

DECIDEDLY the newest thing in the way of pill-coatings is that recently introduced by Mr. Geo. J. Wenck, of this city, who, by employing the method of compression, not only solidifies the medicinal agent used into the form of a tablet, but by the same process he covers the mass with a coating of some tasteless or agreeable substance, such as powdered sugar, chocolate, etc. This method avoids altogether the necessity for employing a tenacious excipient of any kind, and greatly simplifies the process of coating the mass, while the solubility of the product is far greater than that of any pill coated by other methods which we have examined. In the examinations made by us, the whole substance of each "Vellentimel" has become a pulpy mass under the action of water while the coatings of others were undergoing solution. In the case of those covered with chocolate, this solution has been somewhat retarded by the oil naturally present, but even these have dissolved more quickly than the pills.

We understand that Mr. Wenck is already prepared to furnish a considerable variety of these preparations and that others are being added as rapidly as his facilities for manufacturing them will permit.

"The Automaton Pocket Stamp."

G. K. COOKE & Co., of New York, to the great variety of india-rubber stamps made by them, have lately added one of the sort shown in the adjoining illustration, which is capable of giving impressions of the size of the address below:

G. K. COOKE & CO.,
92 Chambers Street, N. Y.

By means of a torsion spring, concealed in the body of the stamp, when the cross-bar is pressed on and the stamp raised from the bed against which it rests, it instantly is reversed, and its type exposed. By relaxing the pressure on the bar, the spiral spring then holds the back of the stamp firmly in place against its bed. In the bottom of the bed is an inking pad, against which the face of the type is held by the spiral spring when the stamp is not in use. The handle is in the form of a tube, permitting the stamp to be affixed to the end of a pen-handle or pencil.

The uses to which rubber stamps are put are already very numerous, and the facility with which this form can be carried in the pocket or kept in a writing-case will add still more to their popularity. As a means for marking clothing they are very handy, and for crossing cheques, receipting for goods, stamping envelopes, and labelling small packages they can be made very convenient.

We see no reason why, with a slight modification of form, and the use of gold-plate instead of nickel, these automatic stamps might not be useful appendages to a watch-chain, instead of the monogram, seal, or locket so frequently worn, and so purely ornamental.

X. Bazin's Perfumes.

THE receipt from Messrs. Bazin & Sargent, 50 Vesey St., of a sample of their "Brighton Bouquet," gives us occasion to refer to the removal of Mr. X. Bazin from Philadelphia to this city with his business of forty years' standing, and to the new partnership which he has formed. Mr. Bazin has long been esteemed one of the leading manufacturers of perfumes and cosmetics, and coincident with the change of location, additions have been made to the resources of the establishment which will insure to it a continuance of the reputation already gained for the good quality of its wares. The Brighton Bouquet is an exceedingly attractive handkerchief perfume, selling at $4.50 per doz., or in bulk if preferred. It is but one of many articles of this class made by the firm.

"Carmel" Soap.

A CAKE of very excellent olive oil soap has been sent us by F. B. Nichols, of 71 William St., N. Y., who is agent for Struve & Co., of Haifa, Syria. The soap is made by a Mission Society in Palestine, and is guaranteed to be free from adulteration. The sample sent has stood the usual tests for purity, and the soap promises to serve, not only for toilet purposes, but also as an excipient for pill masses in which purity of materials is essential. The cakes are more handsome in workmanship than one would be led to expect from a society of Syrian monks. They sell in boxes of six, at $12 to $15 per gross.

Dr. Burq's Metallic Discs.

THE adjoining illustration represents the form recently adopted by Dr. Burq for the discs of various metals with which he has treated cases of hysterical paralysis in Parisian Hospitals. We reproduce the cut from one of our French exchanges, more on account of the appliance being a curiosity than from any belief which we possess in its value as a therapeutic resource.

The excitement which accompanied Dr. Burq's experiments was not unlike, in miniature, that caused by "Perkin's Metallic Tractors" in their day, and probably depended upon the same mental and moral influences for their temporary efficiency.

Westhorp's Patent Antiseptic Marine Lint.

FOR a number of years oakum has been coming into general use as a substitute for *charpie* as a dressing for wounds, stumps, fistulous openings, suppurating cavities, etc., and has proved to be an efficient and inexpensive material for accomplishing its purpose. It is now uncommon to find a surgeon during much operative work or a hospital store-room without it. Until recently a fine quality of commercial oakum has been the only thing readily obtainable, but Mr. T. Westhorp has prepared a quality in which the fibre is freed from foreign matter and carefully carded, but in which the proportion of tar employed is somewhat greater than in the ordinary varieties, thus adding a valuable antiseptic element. During the Franco-German war, the Patent Marine Lint, as it is called, was extensively employed, and its merits, as there proved, warrant a more general use. Druggists will do well to include it among the surgical dressings which they have in stock, and can obtain further information regarding its cost by corresponding with Edward A. Olds, the American agent, at 146–148 William St., in this city.

McNeal's Sulphur Cream.

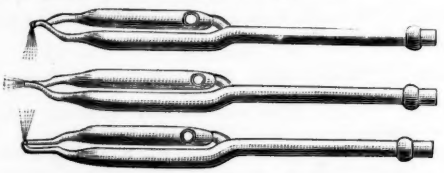
M. MCNEAL & Co., of New York, make an ointment of sulphur perfumed with rose-leaves, which they put up

in handsome japanned tin boxes to retail at 25 cents. The quality of the "cream" and the attractivemanner in which it is prepared for sale are well worthy of favorable notice.

Heinrich Meyer's Cod-Liver Oil.

HEINR. MEYER, of Christiania, Norway, is about introducing to the market in this country, through Mr. Jos. D. Murphy, of 1228 Chestnut St., Philadelphia, an exceedingly handsome variety of cod-liver oil which he claims to be superior to anything yet sent to this country for medicinal purposes. The oil has a brilliancy and clearness which is exceedingly attractive, its taste has no element of rancidity, and the sample sent us has stood the ordinary tests for purity.

We will here remark that, by putting a pinch of table-salt into a wet table-spoon, and then adding the dose of oil, and on the top of this placing another pinch of salt, the oil can be taken with great ease and with freedom, in most cases, from nausea and disturbance of digestion which often follow the taking of stronger flavored varieties.



Weinhagen's Spray Tube.

THIS ingenious worker in glass has lately introduced an atomizing tube, shown in the adjoining figures, which possesses several novel features. A short glass tube, holding enough of a solution to serve for one application, is welded by heat to a larger tube carrying air. The use of a cement of any kind to connect the tubes is hereby avoided, and the form of the apparatus likewise adapts it to be used as a tongue-holder. By variation of the direction of the extremities, a spray may be directed upward, horizontally, or downward.

This mode of construction permits a complete set of tubes and double-bulb blowing attachment to be furnished for $5.00, while the tubes alone are somewhat less in price, and are equally adapted for use with a Fletcher blower, or an air-pump and receiver. For further particulars address Henry Weinhagen, 152 William Street, New York.

The Peters Syringe.

THIS newly invented modification of the rubber-bulb syringe is peculiar as regards the valves which control the flow of its contents. In place of the conical metallic puppet-valve, hitherto employed, an india rubber flap-valve is used. This is attached to a plug of the same material in such manner that it can be removed with the greatest possible ease; can be reversed so that the flow will be in the opposite direction; or turned to the side completely out of the way of the current so as to convert the bulb and tubes into a simple siphon.

The troublesome tendency of the older valves to stick fast is done away with, and the absence of screw-connections, by means of which access was formerly gained to the valves, and which were nearly as liable as the valves to become immovable when long unused or imperfectly cleaned, is another feature hereby avoided. The attachment of an extra section of rubber tubing is all that would be required to convert the syringe into an efficient stomach pump. It is doubtful, however, if the inventor's claim that the instrument will serve the purpose of an aspirator, will be realized in practice, since the fit of the valves, though practically all that could be desired for use with fluids, is not acurate enough for an air-joint.

The material of which the syringe is made appears to be of the best sort, and the workmanship is excellent. We have only to suggest that, for the use of physicians, it will be necessary to provide with the syringe a small tip for use with "Barnes' dilators" and the extra length of tube for introduction into the stomach, as above mentioned.

The Goodyear Rubber Co., of New York, are the manufacturers.

Hancock's Lozenges.

THERE has yet been discovered no method for applying remedies to the mucous membrane of the mouth and throat which combines convenience and efficiency to the extent that is achieved by the lozenge, and when we consider the opportunity offered by the tablet for imprinting the name of the manufacturer, the character of the remedy, and for a display of color and form, we are rather surprised that lozenges have not come into more general use than they yet have, for the administration of other than throat remedies. Certainly the success of Mr. J. F. Hancock, of Baltimore, in this field is quite exceptional, to judge by the variety of samples of troches made by him, and which we have recently had an opportunity for examining.

The list of lozenges of various kinds made by Mr. Hancock embraces not only all those which are officinal in the United States, British, and German Pharmacopœias, but also includes the very valuable sorts used in the London Hospital for Diseases of the Throat, by Dr. Morell Mackenzie, as well as others which, though unofficinal, have the indorsement of a constant demand for many years.

The materials of which these lozenges are composed, appear to be excellent and some of them, in which fruit pastes have been employed to form the mass, are as delicate in flavor as the best confectionery. In form and workmanship they are not surpassed, and the neatness of the packages in which they are issued leave little to be desired.

Another of Mr. Hancock's specialties is a pure variety of mutton tallow which he prepares from the kidney fat of young sheep and deprives completely of its connective tissue and other foreign matters, so that in its plain state, as an excipient for ointment, or with camphor, etc., as a local application, it is unexceptionable.

Poultices.—The common practice in making poultices of mixing the linseed-meal with hot water, and applying them directly to the skin, is quite wrong, because, if we do not wish to burn the patient, we must wait until a great portion of the heat has been lost. The proper method is to take a flannel bag (the size of the poultice required), to fill this with the linseed poultice as hot as it can possibly be made, and to put between this and the skin a second piece of flannel, so that there shall be at least two thicknesses of flannel between the skin and the poultice itself. Above the poultice should be placed more flannel, or a piece of cotton wool, to prevent it from getting cold. By this method we are able to apply the linseed-meal boiling hot, without burning the patient, and the heat, gradually diffusing through the flannel affords a grateful sense of relief which cannot be obtained by other means. There are few ways in which such marked relief is given to abdominal pain as by the application of a poultice in this manner.—DR. T. LAUDER BRUNTON, in *Brain*.

Storm Glasses.—Dissolve 2 parts of Borneo camphor, 1 part of potassium nitrate (saltpetre), and 1 part of ammonium chloride (sal ammoniac) in 100 parts of 95 per cent alcohol, and add enough distilled water to precipitate a small portion of the camphor. Place this in a large test tube with the upper end drawn out, so as to leave an opening not larger than a pin hole. The instrument, which is not of much practical value, is to be fixed in the open air, out of direct sunlight.

NEW PATENTS.

[*The following list is compiled from official sources, especially for* NEW REMEDIES, *by S. H. Wales & Son, Solicitors of Patents, 10 Spruce St., New York, who will furnish gratis to subscribers any information relating to this department.*]

TRADE MARKS REGISTERED DURING JULY, 1878.

Medicinal Preparations.

6,311. Craft & Taylor, Detroit, Mich. The word-symbol "Hoptonic."

6,316. George L. S. Kimberly, Baltimore, Md. The letters "G. L. S. K." in monogram.

6,324. John W. Thomas, New Orleans, La. The pictorial representation of a hare.

6,325. Verein für Chemische Industrie, Mayence and Frankfort-on-the-Maine, Germany.—"An exterior or main triangular figure, in the interior of which are formed four smaller triangles by means of three lines intersecting with the sides of the exterior triangle. The upper horizontal line of the lines forming the interior triangles is extended at both sides beyond the outer triangle, and the ends square or tipped at the upper side, as shown."

6,330. Demas B. Dewey, Brooklyn, N. Y. The device, picture, or pictoral representation of the fabled Centaur.

6,341. The Rubberoid Company, Bristol and Philadelphia, Pa. The fanciful word "Rubberoid."

6,348. Wladislaw L. Jurgielewicz, N. Orleans, La. The word "Jurgielewicz's" and the representation of a globe.

6,349, H. W. Schieffelin & Co., New York, N. Y. The three cod fish in the position forming a triangle, as described, and the word "Norge," the letters forming said word placed in the position as described, within circle surmounted by a caduceus, all as shown.

6,353. Young, Ladd & Coffin, New York, N. Y. The fancifully selected words "Tally Ho."

6,354. John C. Allan, Buffalo, N. Y. The words "Fly Brick," "The little Giant Fly Killer," and the large letter "A."

6,360. Toussaint Mesplié, Washington, D. C. The arbitary symbol-word "Wascopum."

6,361. Francis L. Neufeld, Lancaster, Pa. The monogram as shown, used in coneection with the title or designation, "Neufeld."

6,366. Charles R. Burrage, San Francisco, Cal. The word-symbol "Waxen Queen."

6,370. John R. Planten, Brooklyn, N. Y. The word-symbol "Eureka."

6,373. Sass & Haffner, Chicago, Ill. The letters "S. & H."

6,374. George S. Weaver, Albany, N. Y. A crowned lion (lion issuant), rising or coming up from a heraldic bar or bearing, and holding in his paws a shuttle.

6,383. R. E. Sellers & Co., Pittsburgh, Pa. The word-symbol "Peerless," and the circular device containing the monogram, the five-pronged star, etc.

6,388. Howard Brothers, Fredonia, N. Y. The autograph signature "Howard Bros."

6,390. Robert R. Kent, East Boston, Mass. The word "Desoto," and the circular figure, and the letters "RKR" inclosed therein.

6,398. Thomas Carter, Oakland, Cal. The word "Australian," and the figure of a Kangaroo over the same.

6,429. Henry Chambers, Louisville, Ky. The picture of the Boneset plant, and the autograph signature of "Chambers & Brown."

LABELS REGISTERED DURING JULY, 1878.

July 2d.

1, 594. "Brenenstuhl's Waterproof Leather Dressing." Ellis J. Heyer and William F. Brenenstuhl, Boston, Mass.

1,608. "M. Ottenheimer & Son, Compressed Cooked Spiced Beef." M. Ottenheimer & Son, Baltimore, Md.

1,609. "Dr. Kaufmann's Sulphur Porous Plaster." Ordway Brothers, Lawrence, Mass.

July 9th.

1,614. "Zeigler's Ague Pad." J. Walter Zeigler & Co., Sunbury, Pa.

1,615. "The Egg Preserver." A. B. Thornton, Boonville, Mo.

1,616. "Cutter's Infallible Rheumatic Remedy." Wilson Cutter, Burlington, N. J.

1,621. "Wine, Beef, Cinchona, and Pyrophosphate of Iron." Otto C. Rappold, Brooklyn, E. D., N. Y.

1,622. "Conzath's Complexion Powder." Weller & Co., St. Louis, Mo.

July 16th.

1,625. "Henry's Liver Pills." William H. Caterson, Philadelphia, Pa.

1,626. "Vinum Digestivum" (Digestive Wine). Wm. Procter, Jr., & Co., Philadelphia, Pa.

1,627. "Geneva Liniment." W. S. Schermerhorn, Castleton, N. Y.

July 23d.

1,628. "Capwell's Kidney Regulator." E. C. Capwell & Co., Phenix, R. I.

1,629. "Dr. Augustine's Suppositories for Piles." James A. Hall, Elmira, N. Y.

1,630. "Dr. Augustine's Laxative Pills." James A. Hall, Elmira, N. Y.

1,632. "Geneva Tooth Wash." W. S. Schermerhorn, Castleton, N. Y.

1,633. "The Great National Remedy." Williamson & Burnley, Hazlehurst, Miss.

1,634. "Sure Cure for Sick Headache." Hackley & Eldridge, Janesville, Wis.

1,635. "Saml. S. Scott's Great Hair Restorative." Samuel S. Scott, Dubuque, Iowa.

July 30th.

1,636. "Caterson's Constitution Invigorating Syrup." Wm. M. Caterson, Philadelphia, Pa.

1,637. "Clysterium for the Cure of Leucorrhea, Inflammation, etc." D. Tillotson Gale, Albany, N. Y.

1,638. "Extract Sweet Clover." D. Tillotson Gale, Albany, N. Y.

1,641. "Australian Balm. The Best in the World." Marshall & Co., Milwaukee, Wis.

PATENTS GRANTED DURING JULY, 1878.

July 2d.

Dental pluggers, motor for, S. W. Dennis..... 205,619
Dental purposes, apparatus for reducing metal for, N. B. Slayton..... 205,508
Dental tool, R. Arthur..... 205,462
Fermenting vessels, apparatus for regulating the pressure in a series of, J. M. Pfandler..... 205,572

July 9th.

Celluloid and other plastic compositions, strip for coating articles with, D. C. Lockwood.... 205,880
Dentists' cabinet, B. M. Wilkerson..... 205,938
Oils, apparatus for distillation of, H. Frasch..... 205,792
Truss, A. H. Parker..... 205,896

July 16th.

Crucibles or melting pots, shield for the tops of, J. Feix..... 206,098
Lamp, electrical, E. Bürgin..... 206,083
Lamp, hydrocarbon, C. E. Ball..... 205,943
Truss, hernia, H. Loevy..... 206,117

July 23d.

Acid, process and apparatus for recovering waste sulphuric, F. F. Farrar and F. P. Gill.....206,309
Amalgamator, E. L. Newell.....206,257
Battery, galvanic, E. B. Cutten.....206,166
Carburetter, A. W. Porter.....206,196
Embalming composition, R. J. McGowan.....206,343
Insecticide, J. C. Allan.....206,209
Surgical explorer, C. R. Jennisen.....206,243

July 30th.

Carbon-bisulphide, apparatus for manufacture of, D. D. Parmelee.....206,477
Carburetting apparatus, C. A. Paquelin.....206,402
Hog-cholera compound, J. T. Maxson.....206,595
Iron, preparation of peroxide of, R. and C. Steinau.....206,635
Medicinal compound wafers, pills, lozenges, etc., mold for making, C. Carter.....206,536

NOTES, QUERIES AND ANSWERS.

[*Under this heading we shall, to the best of our ability, endeavor to answer such questions addressed to us as come within the scope of this journal, provided they are accompanied by the name and address of the writer. Answers to queries received after the 5th of the month will lie over until the next issue.*]

No. 441.—**Spirits of Orange and of Cinnamon** (A. M. T., Ohio).

Spirit or essence of orange is not officinal in the U. S. Ph. It may be made by adding 1 fl. oz. of oil of orange (-peel; essence de bigarade) to 15 fl. oz. of stronger alcohol. For some purposes it may be employed stronger, say, 1 part of oil to 9 parts of alcohol. But the former will be found sufficient for all ordinary purposes.

Spirit (or essence) of cinnamon is prepared, according to the U. S. Ph., by dissolving 1 fl. oz. of oil of cinnamon ("Ceylon") in 15 fl. oz. of stronger alcohol.

No. 442.—**Powder for Sweating Feet** (Dr. Al. B.). The following is recommended by Hager.

Salicylic acid	25	grains.
Alum	50	"
Wheat starch	200	"
Oil of bergamot	100	"
Alcohol	50	"
Mix well and add		
Venetian talc	700	"

No. 443.—**Inks for Rubber-Stamps and Stencils** ("Bromine," Pa.).

Black.—Rub together 1 part of finest lampblack and 2 parts of Prussian blue with a little glycerin, then add 1 part of powered gum arabic, and enough glycerin to form a thin paste.

Carmine—Dissolve 24 grains of carmine in 3 fl. oz. of water of ammonia, then add 2 fl. drachms of glycerin. Incorporate with this ½ oz. of powdered gum arabic.

Blue.—Rub together 6 parts of pure Prussian blue and 1 part oxalic acid with a little water, to a perfectly smooth paste. Let it stand in a rather warm place over night, then rub it with more water, and with 1 part of gum arabic to a thin paste.

Aniline Inks may be made of any desired shade in the same manner. The best way of using these inks is by applying them, by means of a small pad, uniformly to a little cushion, on which the stamps are then inked.

The above formulæ have been furnished to us by a correspondent, who says he has tested them by experience. Another set of formulæ, also highly recommended, is the following:

Black.—Finest lampblack, 10 parts; powdered gum arabic, 4 parts; glycerin, 4 parts, water, 3 parts. Dissolve the gum arabic in the water, add the glycerin, then rub the lampblack with the mixture in a mortar.

Colored.—Replace the lampblack in the above formula by the appropriate color: chrome-yellow for *yellow;* red lead or red ochre for *red;* green, ultramarine, or chrome-green for *green;* indigo or Prussian blue, or blue ultramarine for *blue;* umber for *brown*, etc.

ITEMS.

Queries of the American Pharmaceutical Association.—In response to an inquiry, we learn that answers may be expected at the next meeting of the American Pharmaceutical Association to the following queries, accepted at the meeting in Toronto.

By Mr. Geo. W. Kennedy, of Pottsville, Pa. No. 1.—In view of the remedial properties of coca leaf—Erythroxylon Coca—what pharmaceutical preparation can be made, having its properties in the most desirable form?

By Prof. A. W. Miller, Philadelphia. No. 15.—It is written of the berries of benzoin (Spice-Bush Berry), that they yield nearly fifty (50) per cent of fixed oil, besides about five (5) per cent of agreeable volatile oil. Is this really so? The plant being very common in some parts of the United States, for what can its products be utilized?

By Prof. Joseph P. Remington, of Philadelphia. No. 18.—Extractum Glycyrrhizæ fluidum: should the alcoholic strength of the preparation be reduced, or what other change is desirable in the formula to increase its adaptability for masking the taste of unpleasant medicines under varied circumstances?

By James T. Shinn, Philadelphia, Pa. No. 19.—"Can any improvement be suggested in the formula of the Pharmacopœia for fluid extract of wild cherry—keeping the object in view to represent chiefly the astringent and tonic virtues, combined with as much hydrocyanic acid and volatile oil as may be obtained by percolation?"

By James L. Lemberger, of Lebanon, Pa. No. 29.—"Give a formula for a concentrated liquid preparation of lactucarium, from which can be made the syrup, tincture, or other preparations."

By J. U. Lloyd, of Cincinnati, Ohio. No. 25.—"An essay on the conditions necessary to successfully conduct percolations."

No. 26.—"How can the salts of berberina be most easily prepared from the root of Hydrastis Canadensis? What will be the most practical yield, and what are the solubilities of the different salts?"

No. 27.—"Resin of podophyllum is found upon the market in color varying from light brown to deep yellow. Can these various shades be obtained from May-apple root without the use of foreign substances?"

No. 43.—"Do certain medicinal plants lose their medicinal properties upon drying, and will it be better to tincture them while fresh?"

By S. P. Sharples, of Boston, Mass. No. 10.—"Confectioners frequently use deleterious substances for coloring candies. How can harmless colors, suitable for their use, be made?"

No. 48.—"An examination into the method of distinguishing the alkaloids of cinchona bark from each other."

By E. Gregory, of Lindsay, Ontario, Can. No. 23.—"Can salicin be economically made in North America, and by what process?"

By Adolph Tsheppe, of New York City. No. 2.—"What is the therapeutic value of dialyzed iron as an antidote for arsenious acid as compared with hydrated ferrous oxide?"

No. 14.—"How do the commercial bismuth preparations compare with the requirements of the United States Pharmacopœia?"

By James R. Mereim, Jersey City, N. J. No. 52.—"What chemicals may be profitably made by the retail pharmacist, and what apparatus is required for their production?"

By J. F. HANCOCK, Baltimore, Md. No. 56.—"An essay, suggestive and critical, on the best plan of arranging and managing the store-rooms and cellars of a well-conducted dispensing store."

By E. L. BOERNER, of Iowa City, Ia. No. 17.—"What advantage, if any, would result from the removal of fixed oil from colchicum seed preparatory to the preparation of of the fluid extract?"

The answers to the following queries will not be ready and the continuance of the queries will probably be requested.

By R. V. MATTISON, Philadelphia, Pa. No. 13.—"To what extent do the pills of the U. S. Pharmacopœia supply the demand for ready-made pills? Are there any formulas which, if introduced, would add to the value of the list?"

By WILLIAM J. JENKS, Philadelphia, Pa. No. 28.—"Do Rio and East Indian tapioca compare in dietetic value?"

American Pharmaceutical Association.—The president has issued the following announcement: The twenty-sixth annual meeting of the American Pharmaceutical Association will be held in the City of Atlanta, Georgia, during the last week in November, beginning on Wednesday, the 26th, at 3 P.M.

In consequence of the general alarm produced by the rapid spread of that terrible scourge, yellow fever, in some of the towns and cities along the Mississippi, the officers and executive committee of the Association, having obtained the consent of our friends in Georgia, concurred in the desirability of postponing our Annual Meeting, which was appointed to be held in Atlanta on the first Tuesday in September, until some time in November. After further consultation with our Southern friends, as well as with many of our leading members in the North, the above date has been fixed on as most likely to meet the convenience of the greater number of those who would be disposed to attend. It is confidently predicted that long before the end of November frosts will have destroyed the germs of the pestilence, so that not the slightest apprehension need be felt of danger in the journey on this account.

I trust that as many of our members as possibly can will make it a point to attend this meeting, even at the risk of a little inconvenience to themselves. By turning out in good force we shall stimulate the progress of pharmacy in the South, and best show our sympathy for our fellow-laborers there in their efforts to elevate pharmacy and pharmacists to a higher position. We shall, also, by availing ourselves of this opportunity, have the privilege of exchanging a week or two of the most unpleasant part of the wintry weather of the North for that of the mild and genial atmosphere of the South. The proximity of the place of meeting to the far-famed winter resorts in Georgia and Florida will no doubt be an additional attraction to many. Let there be a hearty response to the cordial invitation extended by our Southern brethren, and a general rally around the standard of the A. P. A. in the beautiful city of Atlanta.

Applications for membership should be addressed to the Chairman of the Executive Committee, Geo. W. Kennedy, Pottsville, Pa.

WM. SAUNDERS, *President.*

The Massachusetts College of Pharmacy has moved into the "Old Franklin School House," on Washington Street, near Dover, in Boston, where its usual winter course has already opened under favorable auspices. The library and laboratory possessed by the school are among the best in the country, and the graded two years' course, with compulsory and free laboratory instruction, are among the features which commend this school to students.

The Pittsburg College of Pharmacy entered upon its first session on the 1st inst., with Francis C. Phillips as Professor of Chemistry; W. C. Reiter, M.D., as Professor of Materia Medica and Botany, and S. Henry Stevens, M.D., as Professor of Pharmacy. Six lectures weekly for 20 weeks will constitute the course. A. J. Rankin is Corresponding Secretary, and may be addressed at the cor. of Fourth and Ferry Streets.

Japanese Isinglass as a Mass for Pessaries.—A new application for Japanese isinglass has recently been found. Mr. E. Rennard, in the *Pharmaceutische Zeitschrift für Russland*, points out that gelatin is unsuited for suppositories containing tannic acid, but that the jelly produced from Japanese isinglass has the advantage of not forming with it an insoluble compound. For pessaries and suppositories, one part of the Japanese isinglass to thirty parts of water may be used, but the product has a milky appearance. If it be desirable to have a perfectly clear suppository, this may be obtained by allowing the isinglass to soak in twenty parts of water over night, melting the product with a gentle heat, and then adding to it glycerin. If the isinglass be soaked in glycerin alone, a sticky instead of a firm product is the result.

Original Packages.—As a number of correspondents have inquired for the character and weights of the original packages in which goods of interest to the drug trade reach the market, we have compiled the following brief list, to which we might add many more if it should be desired:

Almonds, seron, varies from 1¼ cwt. to 2 cwt.
" basket, varies from 1¼ cwt. to 1½ cwt.
" (Jordan), box, 25 lbs.
Anatto, case, nearly 2¼ cwt.
Arsenic, cask, about 4 cwt.
Ashes (American), cask, varies from 3½ cwt. to 5 cwt.
" (Russian), cask, 10 cwt.
Burgundy pitch, stand, 1¼ cwt.
Camphor, box, about 1 cwt.
Cassia, chest, 60 lbs.
Cinnamon, bale, 92½ lbs.
Cloves, matt (about 80 lbs.), chest, 200 lbs.
Cochineal, seron, 140 lbs.
Cocoa, bag (about 1 cwt.), cask, 1¼ cwt.
Copperas, hogshead, varies from 16 cwt. to 20 cwt.
Galls, sack, 3½ cwt.
Ginger (Jamaica), barrel, about 1 cwt.
" (Barbadoes), bag, 1¼ cwt.
" (E. I.), bag, 1 cwt.
Gum Arabic (E. I.), chest, 6 cwt.
" " (Turkey), chest, 4 cwt.
Indigo (E. I.), chest, 260 lbs.
" (Guatemala), seron, 250 lbs.
Licorice juice, case, nearly 1½ cwt.
Mace, case, about 1½ cwt.
Madder, cask, varies from 15 cwt. to 23 cwt.
Magnesia, chest, 1 cwt.
Mustard, cask, 18 lbs. and 36 lbs.
Nutmegs, cask, 200 lbs.
Olive oil, chest of 60 flasks; jars, 25 gallons.
Opium (E. I.), chest, 149½ lbs.
" (Turkey), " 136 lbs.
Pepper, black, company's bags, 316 lbs.
" " free trade bags, 28 lbs., 56 lbs., 112 lbs.
" white, bag, about 1½ cwt.
Pimento, bag, about 1 cwt.
Quicksilver, bottle, about 84 lbs.
Rosin, barrel, about 2 cwt.
Sago, chest about 1¾ cwt.; bag, 1 cwt.
Saltpetre (E. I.), bag, 1½ cwt.
" (Refined), barrel, 112 lbs.
Shellac, chest, varies from 1 cwt. to 3 cwt.
Smalts, barrel, 3 cwt.
Soap, chest, 3¼ cwt.
Soda, cask, varies from 3 cwt. to 4 cwt.
Sugar candy, box, about 70 lbs.
Sumach, bag, varies from 1½ to 2 cwt.
Tapioca, barrel, about 1¼ cwt.
Tragacanth, case, about 2½ cwt.
Turpentine, barrel, varies from 2 cwt. to 2½ cwt.
Vermilion, bag, 50 lbs.